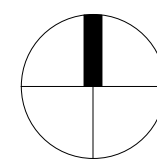


VICINITY MAP



SCOPE OF WORK AREA(S)



DRAWING NOT TO SCALE

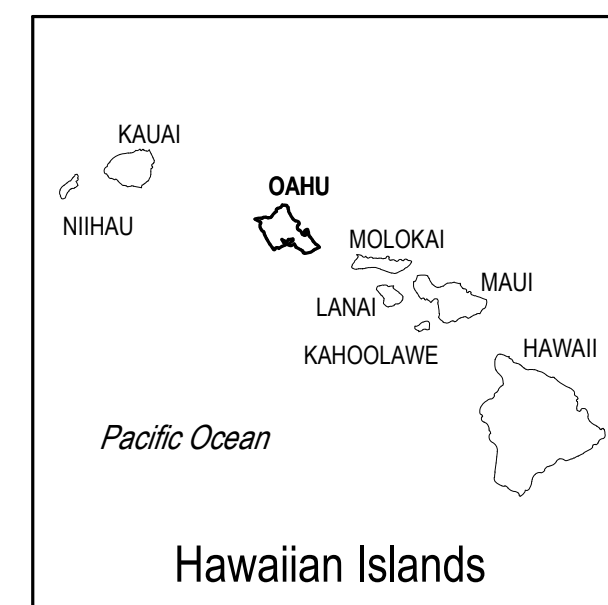
STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

FOR  
DIVISION OF STATE PARKS

JOB NO. F70C616H

**SAND ISLAND STATE  
RECREATION AREA  
IMPROVEMENTS PH. VI**

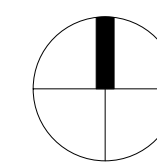
PROJECT LOCATION



Hawaiian Islands



PROJECT LOCATION



DRAWING NOT TO SCALE

PROJECT TEAM

HONOLULU, O'AHU, HAWAI'I

TMK: (1) 1-5-041:006

**CLIENT:**  
STATE OF HAWAII  
DEPT OF LAND AND NATURAL RESOURCES  
1151 Punchbowl Street  
Honolulu, Hawaii 96813

CONSULTANTS

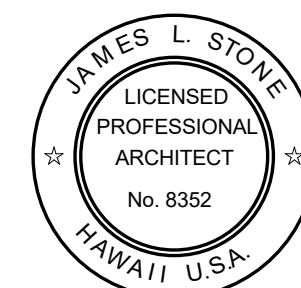
**ARCHITECT:**  
GROUP 70 INTERNATIONAL, INC.  
111 South King Street, Suite 170  
Honolulu, Hawaii 96813

**CIVIL:**  
GROUP 70 INTERNATIONAL, INC.  
111 South King Street, Suite 170  
Honolulu, Hawaii 96813

**STRUCTURAL:**  
MARTIN CHOCK & CARDEN  
1001 Bishop Street,  
Honolulu, Hawaii 96813

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE REHABILITATION AND STABILIZATION OF EXISTING HISTORIC STRUCTURES AT SAND ISLAND, INCLUDING SELECTIVE DEMOLITION, REPAIR, AND PRESERVATION TREATMENTS. WORK ALSO INCLUDES MODIFICATIONS TO SITE CIRCULATION, INCLUDING RELOCATION OF PORTIONS OF THE EXISTING WALKWAY, AND ASSOCIATED SITE IMPROVEMENTS IN ACCORDANCE WITH PROJECT DRAWINGS AND APPLICABLE REGULATIONS.



*[Signature]*  
EXPIRES 4/30/2028

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

APPROVED: \_\_\_\_\_ DATE: 04/17/2026

*[Signature]*

ALAN B. CARPENTER  
ACTING ADMINISTRATOR  
DIVISION OF STATE PARKS  
DEPARTMENT OF LAND AND NATURAL RESOURCES

APPROVED: \_\_\_\_\_ DATE: 04/17/2026

*[Signature]*

DINA U. LAU, P.E.  
ACTING CHIEF ENGINEER  
ENGINEERING DIVISION  
DEPARTMENT OF LAND AND NATURAL RESOURCES

DRAWING NO.  
**G001**

## GENERAL NOTES

- ALL APPLICABLE CONSTRUCTION WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST REVISION OF THE STATE OF HAWAII, DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", DATED 2005; THE COUNTY OF HONOLULU DEPARTMENT OF PUBLIC WORKS "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION", DATED 1986 AND "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION", DATED 1987 (REVISED 2000) WHERE APPLICABLE AND THE APPLICABLE STATE BUILDING CODES AS ADOPTED BY THE COUNTY CODE OF HONOLULU THE 2018 INTERNATIONAL BUILDING CODE (IBC) INCLUDING ALL AMENDMENTS AND AMERICANS WITH DISABILITIES ACT & ARCHITECTURAL BARRIERS ACT ACCESSIBILITY GUIDELINES (ADAAG), FIRE DEPARTMENT REGULATIONS, UTILITY COMPANY REQUIREMENTS AND THE BEST TRADE PRACTICES.
- ALL WORK SHALL CONFORM TO SEISMIC REQUIREMENTS AS REQUIRED BY APPLICABLE BUILDING CODES.
- ALL EQUIPMENT AND SUPPORTS SHALL BE SECURELY FASTENED TO MEET WIND LOAD REQUIREMENTS PER BUILDING CODE.
- VERIFY AND CHECK ALL DIMENSIONS AND DETAILS SHOWN ON THE DRAWINGS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGN PROFESSIONAL FOR DIRECTION.
- DURING THE PERFORMANCE PERIOD OF THIS CONTRACT, THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE CONTROL AND RESPONSIBILITY OF THE JOBSITE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE SITE SAFETY CONDITIONS FOR ALL PERSONS ENTERING THE JOBSITE, THE CONDITION OF THE SITE AND ALL EXISTING IMPROVEMENTS, AND FOR ALL MATERIAL AND EQUIPMENT STORED AT THE PROJECT SITE.
- BLASTING IS NOT ALLOWED.
- IN THE EVENT HISTORIC REMAINS, SUCH AS ARTIFACTS, BURIALS, OR CONCENTRATIONS OF SHELL OR CHARCOAL ARE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL IMMEDIATELY CEASE IN THE VICINITY OF THE ENCOUNTER. NOTIFY THE STATE HISTORIC PRESERVATION DIVISION AT (808) 692-8015, FOR AN ASSESSMENT OF THE ENCOUNTER AND RECOMMENDATIONS ON MITIGATION MEASURES.
- CONSTRUCT TEMPORARY BARRICADES DURING CONSTRUCTION, FOR SAFETY AND THE PROTECTION OF LIFE AND PROPERTY.
- THE SAND ISLAND STATE RECREATION AREA SHALL REMAIN OPEN DURING THE CONSTRUCTION PERIOD. PROVIDE TEMPORARY BARRICADES AND WARNING SIGNS FOR THE SAFETY AND PROTECTION OF THE PUBLIC AND MAINTAIN SAFE PEDESTRIAN AND VEHICLE ACCESS TO THE FACILITY AS REQUIRED. PROVIDE AND MAINTAIN ALL NECESSARY SIGNS AND PROTECTIVE FACILITIES AND TAKE NECESSARY PRECAUTIONS FOR THE PROTECTION, CONVENIENCE AND SAFETY OF THE PUBLIC. CONTRACTOR TO PROVIDE PARKS MAINTENANCE OPERATIONS WITH A KEY TO ALL CONSTRUCTION BARRICADE DOORS ON PREMISES.
- EXISTING PEDESTRIAN WALKWAYS SHALL BE MAINTAINED IN A PASSABLE CONDITION OR PROVIDE FOR ALTERNATE/TEMPORARY ACCESSIBLE PEDESTRIAN ACCESS ROUTES AND FACILITIES PER THE 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN CHAPTER 2, ADAAG 201.3, AND ADAAG 206.1.
- DO NOT PERFORM ANY CONSTRUCTION ACTIVITIES THAT CAUSE ROCKS, SOIL, OR DEBRIS IN ANY FORM TO FALL, SLIDE, OR FLOW ONTO ADJOINING PROPERTIES, STREETS, OR NATURAL WATER COURSES. FINES DUE TO VIOLATIONS AND ANY NECESSARY REMEDIAL ACTIONS SHALL BE BORNE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.
- AS APPLICABLE, COORDINATE CONSTRUCTION ACTIVITIES WITH ADJACENT CONSTRUCTION SITE(S), AVOID CAUSING ANY DELAYS OR HINDRANCE OF WORK OR PERFORMANCE TO THE ADJACENT CONSTRUCTION SITE(S).
- THE UNDERGROUND PIPES, CABLES OR DUCTLINES KNOWN TO EXIST BY THE ENGINEER FROM HIS SEARCH OF RECORDS ARE INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA.
- COORDINATE ALL SITE UTILITY WORK WITH "THE ONE CALL CENTER" AT (866) 423-7287 AT LEAST 5 WORKING DAYS PRIOR TO THE START OF EXCAVATION OR TRENCHING.
- VERIFY AND COORDINATE THE ACTUAL LOCATION OF ALL SITE UTILITIES WITH THE RELATED AGENCIES AND UTILITY COMPANIES IN THE PROJECT AREA PRIOR TO EXCAVATING.
- IF WATER, SEWAGE OR ELECTRICAL SERVICES ARE PLANNED TO BE INTERRUPTED FOR MORE THAN 1 HOUR, PROVIDE FOR TEMPORARY WATER, SEWAGE, AND ELECTRICAL SERVICES DURING THE INTERRUPTION AT NO ADDITIONAL COST TO THE STATE.
- MAKE ARRANGEMENTS FOR TEMPORARY CONSTRUCTION SITE UTILITIES SUCH AS ELECTRICITY, WATER, ETC. AT NO ADDITIONAL COST TO THE STATE.
- ALL EXISTING UTILITIES, SHOWN ON THE PLANS OR UNCOVERED, SHALL BE PROTECTED AT ALL TIMES DURING CONSTRUCTION.
- ANY DAMAGED UTILITIES, AS A RESULT OF CONTRACTOR OPERATIONS, SHALL BE IMMEDIATELY REPAIRED AT NO ADDITIONAL COST TO THE STATE.
- THE CONTRACTOR SHALL DESIGN AND INSTALL ADEQUATE SHORING AND BRACING FOR ALL STRUCTURAL OR REMOVAL TASKS. ALL ELEMENTS/ITEMS DAMAGED AS A RESULT OF THE CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT NO COST TO THE STATE. THE CONTRACTOR SHALL HAVE SOLE RESPONSIBILITY FOR ANY DAMAGE OR INJURIES CAUSED BY OR DURING THE EXECUTION OF THE WORK.
- ADJUST MANHOLE AND /OR VALVE BOX FRAMES AND COVERS AS REQUIRED BY THE UTILITY COMPANIES AND AGENCIES.
- CONFORM WITH THE APPLICABLE PROVISIONS OF CHAPTER 54, WATER QUALITY STANDARDS, AND CHAPTER 55, WATER POLLUTION CONTROL, OF TITLE 11, HAWAII ADMINISTRATIVE RULES OF THE STATE DEPARTMENT OF HEALTH.
- PLAN, CONSTRUCT AND UTILIZE ALL BEST MANAGEMENT PRACTICES (BMP) AS REQUIRED TO COMPLY WITH THE LAWS, STANDARDS, RULES, AND /OR POLICIES OF THE COUNTY, STATE, OR FEDERAL REGULATORY AGENCIES.
- OBTAIN AND PAY FOR ALL REQUIRED PERMITS FROM THE APPROPRIATE GOVERNMENT AGENCIES.
- THE CONTRACTOR SHALL PROVIDE THE SERVICES OF AN ESCP (EROSION AND SEDIMENT CONTROL PLAN) COORDINATOR. THE DESIGNEE SHALL HOLD A CURRENT ESCP COORDINATOR CERTIFICATE FROM THE CITY'S DEPARTMENT OF PLANNING AND PERMITTING.
- RESTORE ALL AREAS DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES, TO EQUAL OR BETTER CONDITION(S), INCLUDING BUT NOT LIMITED TO VEGETATION, PAVEMENTS, EMBANKMENTS, CURBS, SIGNS, LANDSCAPING, STRUCTURES, UTILITIES, WALKWAYS, FENCES, ETC. UNLESS SPECIFICALLY NOTED OTHERWISE
- PROVIDE THEFT-RESISTANT FASTENERS FOR ALL MOUNTING ACCESSORIES.
- PROVIDE STAINLESS STEEL, THEFT-RESISTANT FASTENERS IN ALL PUBLICLY EXPOSED AREAS.
- PROVIDE ALL INCIDENTAL AND NECESSARY MATERIALS AND LABOR TO COMPLETE THE PROJECT.
- THE JOB SITE SHALL BE LEFT IN A SAFE AND SECURE CONDITION AT THE END OF EACH WORKDAY. CLEAN UP AND REMOVE ALL RUBBISH FROM THE JOB SITE ON A DAILY BASIS. MAINTAIN THE WORK AREA AND PREMISES IN A CLEAN ORDERLY CONDITION AT ALL TIMES.
- PRIOR TO ACCEPTANCE OF THE PROJECT BY THE STATE, CLEAN UP AND REMOVE ALL RUBBISH AND DEBRIS FROM THE ENTIRE JOB SITE.
- TAKE ALL MEASURES TO MINIMIZE DISTURBING OR DAMAGING EXISTING NATIVE PLANT SPECIES DURING CONSTRUCTION.
- PRIOR TO ENTERING THE JOB SITE, ALL EQUIPMENT AND FOOTWEAR SHALL BE WASHED WITH POTABLE WATER TO PREVENT EXOTIC PLANTS AND SEEDS FROM BEING INTRODUCED TO THE JOB SITE/AREA.
- NIGHT WORK REQUIRING OUTDOOR LIGHTING SHOULD BE AVOIDED DURING THE SEABIRD FLEDGING SEASON FROM SEPTEMBER 15 THROUGH DECEMBER 15. ARTIFICIAL LIGHTING DISORIENTS SEABIRDS RESULTING IN COLLISION WITH MANMADE ARTIFACTS OR CAUSE GROUNDING. PROVIDE FULLY SHIELDED LIGHTS FOR ANY REQUIRED NIGHT WORK.
- INSPECT AND CLEAN ALL EQUIPMENT, GEAR, AND VEHICLES (PERSONAL AND PROJECT) THAT ENTER OR EXIT THE JOB SITE.
- ENSURE THAT ALL EQUIPMENT, GEAR, AND VEHICLES ARE FREE OF ANY PLANT, ANIMAL, OR EARTHEN MATERIALS PRIOR TO ENTERING THE JOB SITE. ALL EQUIPMENT, GEAR, AND VEHICLES SHALL BE INSPECTED AND CLEANED BEFORE ENTERING THE JOB SITE, AND BEFORE LEAVING ANY WEED INFECTED/CONTAMINATED AREA TO PREVENT TRACKING IN HARMFUL ORGANISMS (E.G.: WEEDS, INSECTS, PESTS) AND PREVENT SPREAD TO PRISTINE AND HEALTHY FOREST AREAS. EQUIPMENT TO INSPECT AND CLEAN INCLUDE BUT IS NOT LIMITED TO:
  - VOLCANIC CINDER ON CLOTHES & FOOTWEAR (TREADS, LACES, BOOT TONGUES), SOCKS, PANT LEGS, POCKETS, JACKETS, RAIN GEAR (POCKETS AND CUFFS)
  - ROACHES, ANTS AND OTHER PESTS ON EQUIPMENT & SUPPLIES-TOOLS, TOOL BAGS, BACKPACKS & BAGS (FOLDS, POCKETS, VELCRO), WOOD AND BUILDING MATERIALS, FENCING MATERIALS, BOTTOMS OF PLASTIC BUCKETS, CARDBOARD BOXES, OPEN FOOD AND WATER CONTAINERS, TENTS, HAMMOCKS, TARPS, HELICOPTER SLING NETS, CHAINSAW BLADES.
  - VEHICLES - THE INSIDE OF THE VEHICLES SHOULD BE VACUUMED AND THE TRUCK BEDS SWEEPED OUT REGULARLY, ESPECIALLY IF USED OFF-ROAD. CLEAN PLACES SUCH AS THE INSIDE LIP OF BUMPERS, SEATS, FLOORS, DASHBOARDS, DOOR JAMBS, TIRES (ESPECIALLY TIRE TREADS), AND THE UNDERCARRIAGE.
  - HEAVY EQUIPMENT, TRUCKS, ALL TYPES OF EARTHMOVING CONSTRUCTION EQUIPMENT AND GENERAL CONSTRUCTION EQUIPMENT AND SUPPLIES.
  - OTHER- ENSURE SOIL IS STERILE AND FREE OF INSECTS, WEEDS, AND PATHOGENS. ANYTHING SUSPICIOUS SHOULD NOT BE TAKEN ONTO THE JOB SITE.
- ON A DAILY BASIS, PACK AND REMOVE ALL TRASH, INCLUDING ANY DISCARDED FOOD, FROM THE JOB SITE TO PREVENT NEGATIVELY AFFECTING THE FLORA AND FAUNA AT THE FIELD SITE. (DISCARDED FOOD MAY CONTAIN UNSEEN INSECTS, FUNGUS, BACTERIA, AND PARASITES, AND IS AN ATTRACTANT FOR INVASIVE INSECTS).
- CLEAN AND DISINFECT EQUIPMENT PRIOR TO MOBILIZATION TO JOB SITE.
- BEFORE COMMENCING WORK, CONTRACTOR TO VERIFY EXTENT OF DEMOLITION WITH THE STATE
- MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER CONSTRUCTION OF ANY PART OF THE WORK SHALL BE INCLUDED AS IF THEY WERE INDICATED IN THE DRAWINGS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL LAYOUT HIS OWN WORK, AND SHALL PROVIDE ALL DIMENSIONS REQUIRED FOR OTHER TRADES
- WHERE DETAILS ARE NOT CALLED OUT BUT ARE NOTABLY SIMILAR IN CHARACTER/DESIGN INTENT TO THOSE THAT ARE CALLED OUT WITH A DETAIL/DIMENSION, UTILIZE SIMILAR DETAILS. WHERE CHARACTER/DESIGN INTENT CANNOT BE DETERMINED, CONSULT THE STATE AND DESIGN PROFESSIONAL BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL NOTIFY THE DESIGN PROFESSIONAL AND THE STATE OF ANY DAMAGE DISCOVERED TO STRUCTURAL SUPPORTS, METAL DECKING OR SUBSTRATES.
- CONTRACTOR IS RESPONSIBLE TO INSPECT SUBSTRATE FOR ANY WATER DAMAGE & INVESTIGATE EXTENT OF MOISTURE INFILTRATION.
- PROVIDE WEATHER PROTECTION FOR ANY AREAS WHERE REMOVAL OF MATERIAL MAY CAUSE WATER INFILTRATION.

## GENERAL DEMOLITION NOTES

- THE INTENT OF THE DEMOLITION PLANS IS TO SHOW THE GENERAL NATURE OF THE DEMOLITION SCOPE. THE DRAWINGS REPRESENT EXISTING FIELD CONDITIONS THAT HAVE NOT BEEN FIELD VERIFIED BY AS-BUILT DOCUMENTATION. THE CONTRACTOR AND SUBCONTRACTOR(S) ARE RESPONSIBLE TO BECOME FAMILIAR WITH ALL EXISTING FIELD CONDITIONS AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES. VERIFY EXISTING CONDITIONS AND CONSTRAINTS UNDER WHICH THE WORK IS TO BE PERFORMED. NO CLAIM FOR EXTRA COST WILL BE ALLOWED BECAUSE OF LACK OF EXAMINATION OR KNOWLEDGE OF EXISTING CONDITIONS. SUBMITTAL OF BID IMPLIES THAT CONTRACTOR AND HIS SUBCONTRACTORS HAVE MADE SUCH EXAMINATIONS AND ARE FAMILIAR WITH SITE CONDITIONS. COORDINATE AND VERIFY WITH THE OWNER ALL ITEMS TO BE SALVAGED PRIOR TO DEMOLITION.
- USE ALL MEANS NECESSARY TO PREVENT THE SPREAD OF DUST TO ADJACENT AREAS.
- CONDUCT DEMOLITION OPERATIONS AND REMOVAL OF DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH STREETS, TRAFFIC, WALKWAYS, SIDEWALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. COMPLY WITH LOCAL JURISDICTION REQUIREMENTS FOR RECYCLING AND TREATMENT OF ITEMS TO BE RECYCLED.
- DISPOSE OF ALL DEMOLISHED OR REMOVED MATERIALS LEGALLY OFF THE SITE. COMPLY WITH ALL LOCAL HAULING AND DISPOSAL REQUIREMENTS.
- IMMEDIATELY ISOLATE THE AFFECTED AREA IF ASBESTOS OR OTHER HAZARDOUS MATERIAL ARE DISCOVERED DURING CONSTRUCTION. NOTIFY OWNER FOR FURTHER INSTRUCTION BEFORE PROCEEDING WITH WORK. THE ARCHITECT HAS NO KNOWLEDGE OF AND SHALL NOT BE HELD LIABLE FOR ANY ASBESTOS OR OTHER HAZARDOUS MATERIALS ON THE PROJECT/JOBSITE.
- EXISTING UTILITIES TO REMAIN IN SERVICE. PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS.
- SCHEDULE ANY SHUT DOWNS WITH OWNER, PROJECT MANAGER AND PROPERTY MANAGER AS SOON AS POSSIBLE OR A MINIMUM OF ONE (1) WEEK PRIOR AND NOTIFY PROPERTY MANAGER AND AFFECTED TENANTS AT LEAST ONE (1) DAY PRIOR TO SCHEDULED SERVICE SHUT DOWN(S) FOR UTILITIES AND ALL OTHER SERVICES.
- REMOVE ALL NON-STRUCTURAL ITEMS THAT PROTRUDE ABOVE THE CONCRETE FLOOR SURFACE.
- REMOVE MISCELLANEOUS ANCHORS, CLIPS, BOLTS, ETC EXCEPT WHERE THEY ARE SUPPORTING ALL SERVICES, SYSTEMS, OR OTHER ELEMENTS INDICATED TO REMAIN.
- UPON COMPLETION, CLEAN AREA OF DEMOLITION TO A TIDY, UNIFORM CONDITION REMOVING ALL DEBRIS. DUST ALL REMAINING AREAS AFFECTED BY DEMOLITION. CLEAN ALL AREAS IMPACTED BY THE DEMOLITION, INCLUDING BUT NOT LIMITED TO, ADJACENT OCCUPIED AREAS AND AREAS NOT WITHIN THE SCOPE OF WORK.
- ABANDONING ITEMS OR UNUSED UTILITIES IN PLACE IS PROHIBITED UNLESS SPECIFICALLY PERMITTED BY THE OWNER.
- COMPLY WITH ALL STANDARD LOCAL, NATIONAL, STATE AND FEDERAL SAFETY REQUIREMENTS FOR DEMOLITION
- CONFIRM WITH OWNER LOCATION OF ALL SALVAGED MATERIALS FOR STORAGE.
- PROVIDE TEMPORARY, DECORATIVE AND NONCOMBUSTIBLE CONSTRUCTION BARRICADES AS APPROVED BY OWNER.

## INDEX TO DRAWINGS

### COMMON SHEETS

SHEET NO.	SHEET NAME
G001	TITLE SHEET
G002	INDEX TO DRAWINGS, GENERAL NOTES
G003	SITE PLAN
C001	EROSION AND SEDIMENT CONTROL NOTES
C002	EROSION CONTROL - OVERALL PLAN BID ALT 4
C003	EROSION CONTROL DETAILS
C004	BID ALT 4 SITE DETAILS

### ARCHITECTURAL

SHEET NO.	SHEET NAME
A2 - ANTI AIRCRAFT	
D2-101	ANTI-AIRCRAFT GUN EMPLACEMENT TOWER DEMOLITION SCOPE
A2-101	ANTI-AIRCRAFT GUN EMPLACEMENT TOWER PLANS AND ELEVATIONS
A2-102	ANTI-AIRCRAFT GUN EMPLACEMENT TOWER PLANS, ELEVATIONS AND SECTIONS

A3 - HARBOR ENTRANCE	
A3-101	HARBOR ENTRANCE CONTROL POST TOWER POST PLAN AND ELEVATIONS
A3-102	HARBOR ENTRANCE CONTROL POST TOWER STAIR - BID ALT 3
A3-103	ANTI-AIRCRAFT GUN EMPLACEMENT TOWER PERSPECTIVE VIEWS




A4 - CABLE HUT	
D4-101	CABLE HUT (TRAIN) DEMOLITION SCOPE
A4-101	CABLE HUT FLOOR PLAN AND ELEVATIONS
A4-102	CABLE HUT PERSPECTIVE VIEWS

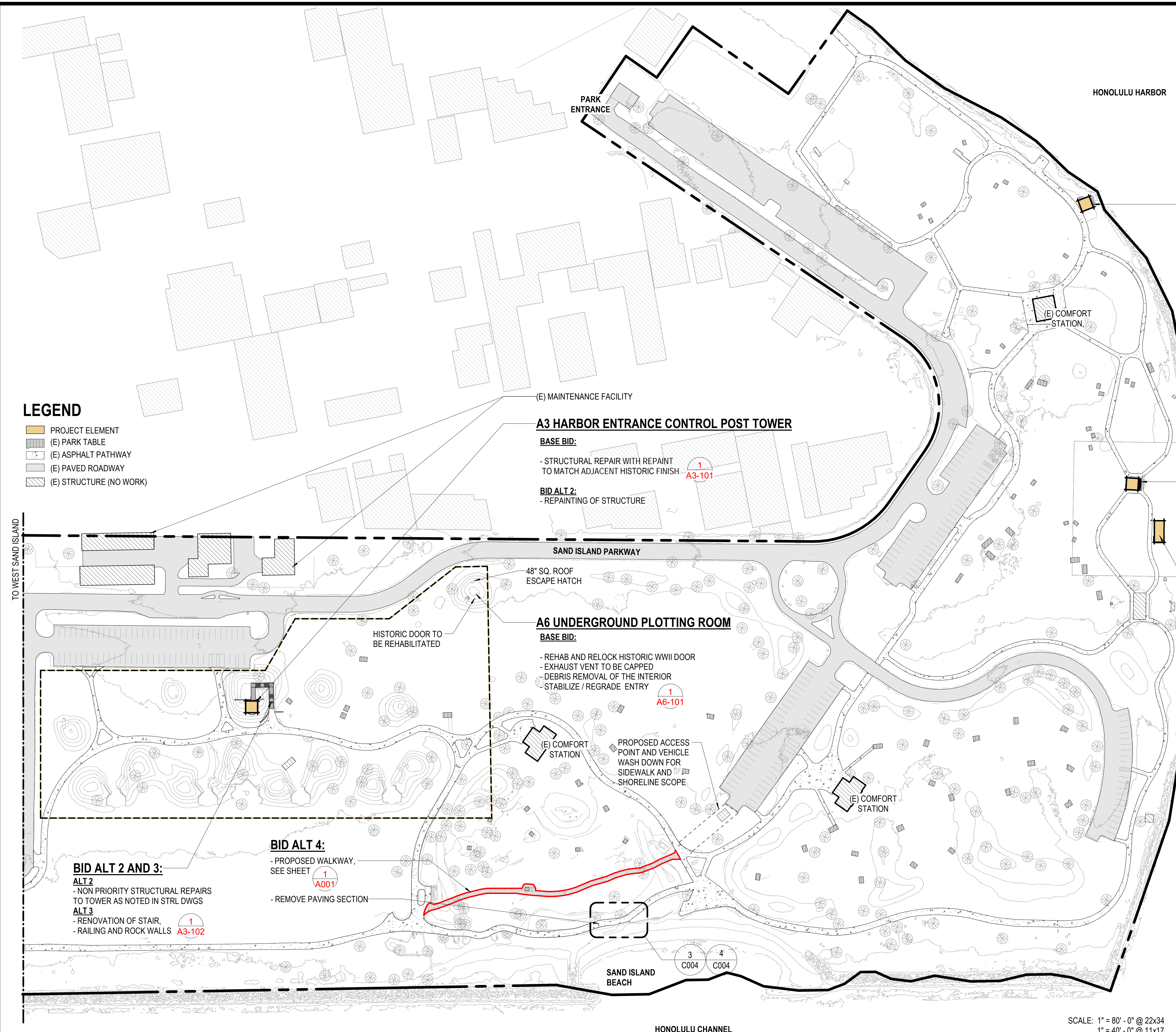
A5 - AIR RAID	
D5-101	EXISTING AIR RAID SHELTER (TRAIN STATION) DEMOLITION SCOPE
A5-101	AIR RAID SHELTER PLANS AND ELEVATIONS
A5-102	AIR RAID SHELTER PERSPECTIVE VIEWS

A6 - UNDERGROUND PLOTTING ROOM	
A6-101	UNDERGROUND PLOTTING ROOM - PLAN

### STRUCTURAL

SHEET NO.	SHEET NAME
S-001	GENERAL NOTES
S-002	TYPICAL REPAIR DETAILS
S2-101	ANTI-AIRCRAFT GUN EMPLACEMENT TOWER FRAMING PLANS
S3-101	HARBOR ENTRANCE CONTROL TOWER FRAMING PLANS
S3-102	HARBOR ENTRANCE CONTROL TOWER FRAMING ELEVATIONS

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:
					
<b>STATE OF HAWAII</b> DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION <b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006 <b>INDEX TO DRAWINGS, GENERAL NOTES</b>					
DESIGNED: JS					
DRAWN: G70		SUBMITTED: BID SUBMITTAL <i>DL</i>			
CHECKED: KC		DATE: 04/13/2026			
APPROVED: -		SCALE: AS NOTED			
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION  EXPIRES 4/30/2028		Dina Lau E-signed 2026-04-17 08:22AM HST dina.u.lau@hawaii.gov State of Hawaii Civil Engineer			
				<b>G002</b>	



**LEGEND**

- PROJECT ELEMENT
- (E) PARK TABLE
- (E) ASPHALT PATHWAY
- (E) PAVED ROADWAY
- (E) STRUCTURE (NO WORK)

**A2 ANTI-AIRCRAFT GUN EMPLACEMENT TOWER**

1  
A2-101

**BASE BID:**

- REPAIR AND REINSTALL WOOD TRELLIS
- REPAIR SPALLING
- ADDITION OF SCUPPERS AND ROOFING MEMBRANE
- RESTORE TO HISTORIC FINISH/PAINT
- ADDED GRADE FILL
- ADDED RAILING
- REPAINTING OF STRUCTURE

**BID ALT #1:**

- PARK ELEMENTS: BENCHES, TRASH CAN
- (E) RIPRAP TYP

**A3 HARBOR ENTRANCE CONTROL POST TOWER**

**BASE BID:**

- STRUCTURAL REPAIR WITH REPAINT TO MATCH ADJACENT HISTORIC FINISH

1  
A3-101

**BID ALT 2:**

- REPAINTING OF STRUCTURE

**A5 AIR RAID SHELTER (TRAIN STATION)**

1  
A5-101

**BASE BID:**

- DEMOLISH NON-HISTORIC WOOD AND CONCRETE EXTERIOR
- RESTORE TO HISTORIC QUONSET HUT
- ADDED HOLLOW METAL PREFINISHED ACCESS PANEL
- DEBRIS REMOVAL OF THE INTERIOR

**A6 UNDERGROUND PLOTTING ROOM**

**BASE BID:**

- REHAB AND RELOCK HISTORIC WWII DOOR
- EXHAUST VENT TO BE CAPPED
- DEBRIS REMOVAL OF THE INTERIOR
- STABILIZE / REGRADE ENTRY

1  
A6-101

**A4 CABLE HUT (TRAIN)**

2  
A4-101

**BASE BID:**

- DEMOLISH NON-HISTORIC WOOD AND CONCRETE, INCLUDING RAILINGS, STAIRS, AND ROOF
- DETERRENT FENCE

**BID ALT 4:**

- PROPOSED WALKWAY, SEE SHEET

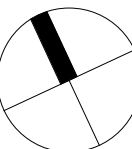
1  
A001

- REMOVE PAVING SECTION

**BID ALT 2 AND 3:**

- ALT 2**
- NON PRIORITY STRUCTURAL REPAIRS TO TOWER AS NOTED IN STRL DWGS
- ALT 3**
- RENOVATION OF STAIR, RAILING AND ROCK WALLS

1  
A3-102



REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:

EXPIRES 4/30/2028

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

**SAND ISLAND SRA PARK IMPROVEMENTS PH. VI**  
TAX MAP KEY: 1-5-041:006

**SITE PLAN**

DESIGNED: JS

DRAWN: G70

CHECKED: KC

APPROVED: -

SUBMITTED: BID SUBMITTAL *DL*

DATE: 04/13/2026

SCALE: AS NOTED

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

Dina Lau  
E-signed 2026-04-17 08:22AM HST  
dina.u.lau@hawaii.gov  
State of Hawaii  
Civil Engineer

**G003**

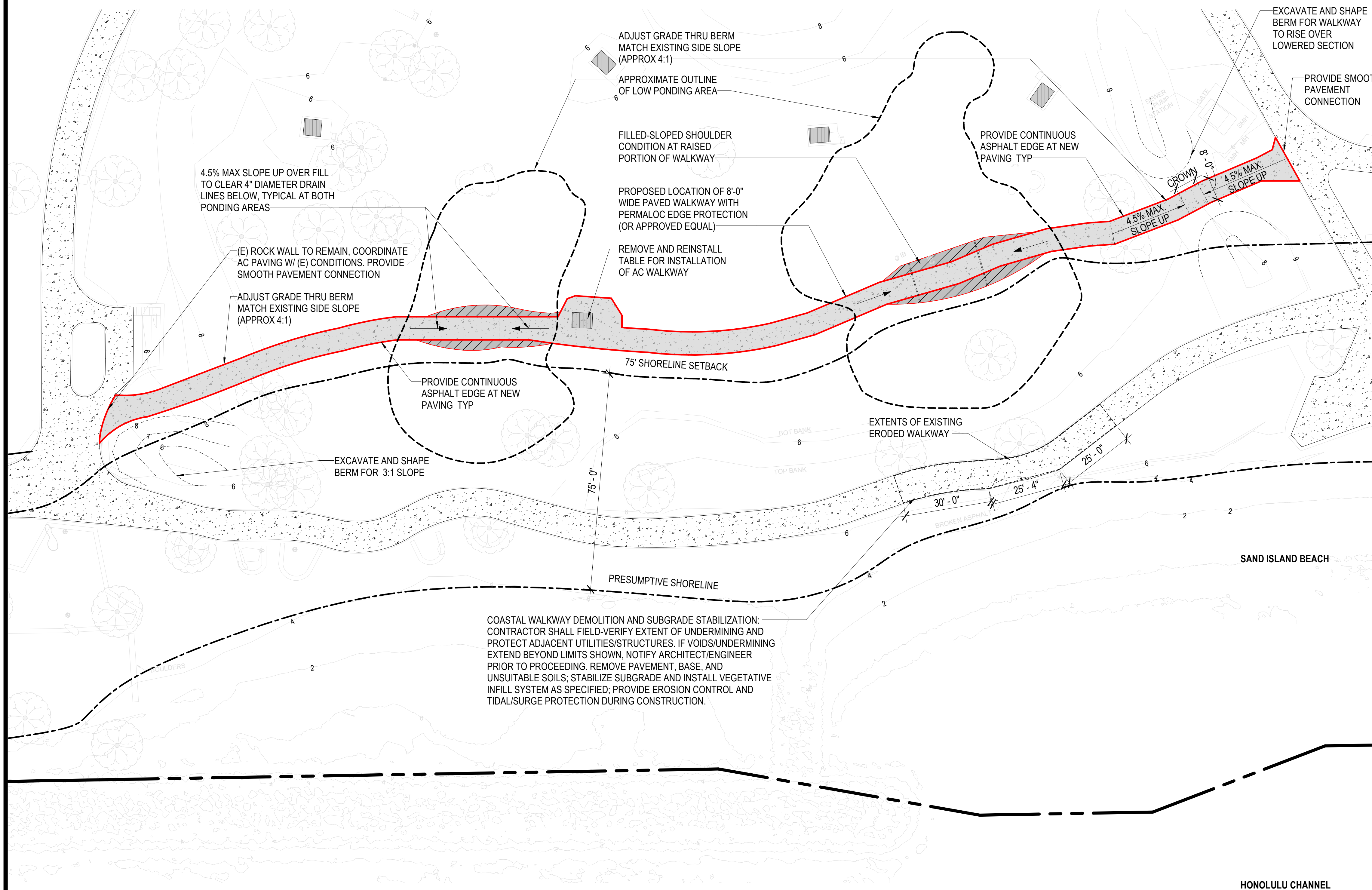
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1" = 40' - 0" @ 11x17

HONOLULU CHANNEL

SAND ISLAND BEACH

TO WEST SAND ISLAND

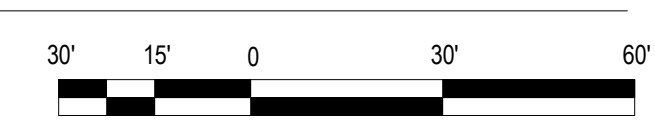
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**2 KEY PLAN - PROPOSED WALKWAY**  
SCALE: 1" = 300'-0"

- LEGEND**
- PROJECT ELEMENT
  - (E) PARK TABLE
  - (E) ASPHALT PATHWAY
  - (E) PAVED ROADWAY
  - (E) STRUCTURE (NO WORK)

**1 SITE PLAN - PROPOSED WALKWAY - BID ALT 4**  
SCALE: 1" = 20'-0"



REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:

EXPIRES 4/30/2028

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

**SAND ISLAND SRA PARK IMPROVEMENTS PH. VI**  
TAX MAP KEY: 1-5-041:006  
**ENLARGED SITE PLAN AT PROPOSED WALKWAY - BID ADDITIVE 4**

**A001**

DESIGNED: JS	SUBMITTED: BID SUBMITTAL <i>DL</i>
DRAWN: G70	DATE: 04/13/2026
CHECKED: KC	SCALE: AS NOTED
APPROVED: -	

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

Dina Lau  
E-signed 2026-04-17 08:22AM HST  
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State of Hawaii  
Civil Engineer

# NON-STRUCTURAL BEST MANAGEMENT PRACTICES:

## NON-STRUCTURAL BEST MANAGEMENT PRACTICES:

### 1. WASTE DISPOSAL

#### a. WASTE MATERIALS

ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN A LEAKPROOF METAL DUMPSTER. ALL DUMPSTERS AT THE PROJECT SITE SHALL BE EMPTIED A MINIMUM OF ONCE PER WEEK, AND MORE OFTEN, IF NECESSARY. NO CONSTRUCTION MATERIALS SHALL BE BURIED ON-SITE. THE CONTRACTOR, AT HIS EXPENSE, SHALL TRAIN SUPERVISORY PERSONNEL IN THE CORRECT PROCEDURES FOR WASTE DISPOSAL.

#### b. HAZARDOUS WASTE

ALL HAZARDOUS WASTE MATERIAL SHALL BE DISPOSED OF IN A MANNER PERMITTED BY LOCAL, STATE OR FEDERAL REGULATIONS.

#### c. SANITARY WASTE

ALL SANITARY WASTE SHALL BE COLLECTED FROM PORTABLE RESTROOM FACILITIES A MINIMUM OF ONCE PER WEEK, AND MORE OFTEN, IF NECESSARY.

### 2. EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES

a. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED WEEKLY PRIOR TO AND AFTER EACH WEEK'S CONSTRUCTION, ESPECIALLY DURING HEAVY RAINFALL. CONTRACTOR SHALL ALSO ENSURE DRAINAGE THROUGH FILTER MATERIAL IS MAINTAINED.

b. ALL CONTROL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF THE PROBLEM BEING DISCOVERED.

c. THE FINAL LIFT OF EACH DAY'S WORK SHALL BE COMPACTED TO PREVENT EROSION OF FILL MATERIAL.

d. ENSURE PROTECTION OF ROADWAYS FROM MUD, DIRT, AND DEBRIS.

e. ENSURE THAT ALL TIRES OF CONSTRUCTION VEHICLES ARE SUFFICIENTLY CLEANED OFF SO THAT DIRT OR DEBRIS IS NOT TRACKED OFF THE CONSTRUCTION SITE. WASHING OFF TIRES WITH WATER WILL NOT BE ACCEPTABLE UNLESS THE RUNOFF IS COMPLETELY CONTAINED AND DOES NOT ENTER THE STORM DRAIN SYSTEM OR ONTO THE STATE'S RIGHT OF WAY.

f. AT THE END OF GRADING OPERATIONS AND AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL INSPECT ALL DRAINAGE STRUCTURES SURROUNDING THE PROJECT SITE. ANY ACCUMULATED SEDIMENT AND DEBRIS FOUND IN THE DRAINAGE STRUCTURES SHALL BE REMOVED.

g. ANY DIRT OR GRASSSED AREA DISTURBED SHALL BE RESTORED BY RE-GRASSING THE AREA OR BY SEEDING HYDROMULCH. THE GRASS SHALL BE FULLY ESTABLISHED AT COMPLETION OF PROJECT.

### 3. SPILL PREVENTION

a. THE FOLLOWING MATERIAL MANAGEMENT PRACTICES SHALL BE FOLLOWED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIAL AND SUBSTANCES TO STORMWATER RUNOFF AND DISCHARGE.

#### b. - GOOD HOUSEKEEPING

- STORE ONLY ENOUGH PRODUCTS AND MATERIAL REQUIRED TO PERFORM THE JOB.

- MATERIALS THAT MAY BECOME POTENTIAL POLLUTANTS THAT ARE STORED OUTSIDE SHALL BE STORED IN A NEAT AND ORDERLY MANNER IN THEIR ORIGINAL CONTAINERS, AND IF POSSIBLE, COVERED OR ENCLOSED.

- PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS, WITH THE ORIGINAL MANUFACTURER'S LABELING.

- PRODUCTS SHALL NOT BE MIXED, EXCEPT AS RECOMMENDED OR ALLOWED BY THE MANUFACTURERS.

- APPROPRIATE PRODUCTS SHALL HAVE SECONDARY CONTAINMENT.

- WHENEVER POSSIBLE, USE ALL OF A PRODUCT PRIOR TO DISPOSING OF THE CONTAINER.

- THE MANUFACTURER'S DIRECTIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED.

- MATERIAL SHALL BE DISPOSED OF IN A MANNER PERMITTED BY LOCAL, STATE OR FEDERAL REGULATIONS.

- CONTRACTOR SHALL CONDUCT DAILY INSPECTIONS TO ENSURE PROPER USE AND DISPOSAL OF MATERIAL.

- LITTER SHALL BE PICKED-UP ON A DAILY BASIS AND DISPOSED OF PROPERLY.

- DUST SHALL BE CONTROLLED BY WETTING OR BY THE APPLICATION OF A SOIL BINDER.

#### c. - HAZARDOUS PRODUCTS

- PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS, WITH THE ORIGINAL MANUFACTURER'S LABELING.

- SAFETY DATA SHEETS (SDS) SHALL BE RETAINED AND AVAILABLE FOR REVIEW BY USERS.

- THE MANUFACTURER'S DIRECTIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED.

- ALL HAZARDOUS WASTE MATERIAL SHALL BE DISPOSED OF IN A MANNER PERMITTED BY LOCAL, STATE OR FEDERAL REGULATIONS.

### 4. PRODUCT SPECIFIC PRACTICES

THE FOLLOWING PRACTICES SHALL BE FOLLOWED ON-SITE:

#### a. - VEHICLES

ALL ON-SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND SHALL BE SUBJECT TO REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKS OCCURRING. LEAKS THAT CANNOT BE REPAIRED IMMEDIATELY SHALL BE CONTAINED IN SPILL PANS OR OTHER APPROPRIATE CONTAINERS.

#### b. - PETROLEUM PRODUCTS

PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS THAT SHALL BE CLEARLY LABELED.

ASPHALT—CONTAINING MATERIALS (SUCH AS TACK AND PRIME COATS) USED ON-SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S DIRECTIONS.

#### c. - CONCRETE TRUCKS

CONCRETE TRUCKS SHALL DISCHARGE DRUM WASH WATER ONLY AT DESIGNATED SITES. WASH WATER SHALL NOT BE DISCHARGED TO THE STORM DRAIN SYSTEM. THE CONTRACTOR SHALL CONTAIN THE DISCHARGED DRUM WASH WATER AT THE DESIGNATED SITE AND SHALL REMOVE CONCRETE AND OTHER RESIDUE AS REQUIRED BY THE ENGINEER.

#### d. - SPILL CONTROL PRACTICES

IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES, THE FOLLOWING SPILL PREVENTION AND CLEANUP PRACTICES SHALL BE OBSERVED:

e. - MANUFACTURERS' RECOMMENDATIONS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED, AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND LOCATION OF CLEANUP SUPPLIES.

f. - MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE.

g. - ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

h. - ALL SPILL AREAS SHALL BE KEPT WELL VENTILATED, AND CLEANUP PERSONNEL SHALL WEAR APPROPRIATE CLOTHING AND EQUIPMENT.

i. - HAZARDOUS MATERIALS SPILLS, REGARDLESS OF SIZE, SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER. A REPORT SHALL BE PREPARED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL IN THE FUTURE, AND HOW TO CLEANUP SUCH A SPILL. A DESCRIPTION OF THE SPILL, THE CAUSE, AND THE CLEANUP MEASURE UNDERTAKEN SHALL ALSO BE INCLUDED IN THE REPORT.

j. - THE CONTRACTOR SHALL BE RESPONSIBLE FOR SPILL PREVENTION AND CLEANUP. HE SHALL DESIGNATE AT LEAST ONE ON-SITE PERSONNEL TO RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THE CONTRACTOR, AT HIS EXPENSE, SHALL DO TRAINING. THE NAME OF THIS PERSON SHALL BE POSTED IN THE MATERIAL STORAGE AREA AND IN THE ON-SITE OFFICE TRAILER.

k. - WHERE A LEAK, SPILL, OR OTHER RELEASE CONTAINING A HAZARDOUS SUBSTANCE OR OIL IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR PART 110, 40 CFR PART 117, OR 40 CFR PART 302, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS THE CONTRACTOR HAS KNOWLEDGE OF THE DISCHARGE. NOTE THAT THE REPORTABLE QUANTITY FOR OIL AND FUEL PRODUCTS IS A SPILL OF 25 GALLONS OR MORE, A SPILL NOT CLEANED WITHIN 72 HOURS, OR A SPILL THAT THREATENS GROUND OR SURFACE WATERS. THE ENGINEER WILL NOTIFY THE NATIONAL RESPONSE CENTER (NRC) AT (800) 424-8802, THE DOH CLEAN WATER BRANCH AT (808) 586-4309, THE DOH CLEAN WATER BRANCH VIA EMAIL AT [cleanwaterbranch@doh.hawaii.gov](mailto:cleanwaterbranch@doh.hawaii.gov) (DURING NON-BUSINESS HOURS), THE DOH HAZARD EVALUATION AND EMERGENCY RESPONSE OFFICE AT (808) 586-4249, THE U.S. COAST GUARD MAUI STATION OFFICE AT (808) 986-0023, AND THE LOCAL EMERGENCY PLANNING COMMITTEE AT (808) 720-7285. THE CONTRACTOR SHALL ALSO PROVIDE TO THE ENGINEER WITHIN 1 CALENDAR DAY OF KNOWLEDGE OF THE RELEASE, THE CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF THE RELEASE. THE ENGINEER WILL PROVIDE INFORMATION TO THE NRC AS REQUIRED.

# EROSION CONTROL AND BMP NOTES FOR WORK

1. THE CONTRACTOR SHALL INSTALL DEVICES AND UTILIZE BEST MANAGEMENT PRACTICES (BMPS) APPROPRIATE FOR THE PROJECT. THE CONTRACTOR SHALL REFERENCE THE STATE OF HAWAII'S CONSTRUCTION BEST MANAGEMENT PRACTICES FIELD MANUAL.

A COPY OF THIS DOCUMENT SHALL BE KEPT ON THE PROJECT SITE AT ALL TIMES AND SHALL BE PRODUCED UPON REQUEST OF THE DISTRICT ENGINEER OR HIS DESIGNATED REPRESENTATIVE. THESE DOCUMENTS SHALL SERVE AS GUIDELINES ONLY, AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT SAFETY RELATIVE TO TRAFFIC, PONDING PROBLEMS, ETC. ARE CONSIDERED AND ADDRESSED. THIS WORK SHALL BE CONSIDERED PART OF THE PROJECT AND WILL NOT BE PAID FOR BY THE STATE.

2. THE CONTRACTOR SHALL CONSIDER AND INSTALL BMP MEASURES WHICH TAKE INTO ACCOUNT HIGH INTENSITY AND PROLONGED RAINFALL, AND TO ADDRESS THE POTENTIAL PROBLEMS THAT MAY RESULT.

3. ALL AREAS USED IN SUPPORT OF CONSTRUCTION ACTIVITIES DISTURBED OR DAMAGED BY THE CONTRACTOR, INCLUDING BUT NOT LIMITED TO, STAGING AREAS, CONSTRUCTION ENTRANCE/EXIT, AND TRAVEL ROUTES, SHALL BE TEMPORARILY STABILIZED DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 209 OF THE 2005 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THESE AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER AFTER THE COMPLETION OF CONSTRUCTION. DISTURBED AND EXPOSED AREAS SHALL BE PERMANENTLY STABILIZED USING VEGETATIVE COVER, PAVEMENT, OR EQUIVALENT TO MATCH PRE-EXISTING OR BETTER CONDITION AS APPROVED BY THE STATE.

4. FINAL STABILIZATION AND RESTORATION OF DISTURBED OR DAMAGED AREAS SHALL BEGIN IMMEDIATELY AS SOON AS CONSTRUCTION IS COMPLETED AND THE CONSTRUCTION SUPPORT AREAS ARE NO LONGER USED.

5. THE CONTRACTOR SHALL DESIGNATE AT LEAST ONE (1) PERSON WHO WILL BE RESPONSIBLE FOR INSPECTION, MAINTENANCE, AND REPAIR ACTIVITIES.

6. DISCHARGES INTO STATE WATERS DUE TO DEWATERING AND/OR HYDROTESTING ACTIVITIES REQUIRE SEPARATE NPDES PERMIT(S) FROM THE STATE DEPARTMENT OF HEALTH (DOH). IF THE CONTRACTOR CHOOSES TO DISCHARGE DEWATERING AND/OR HYDROTESTING EFFLUENT INTO STATE WATERS, HE SHALL OBTAIN THE NECESSARY PERMIT(S) FROM THE DOH AND SHALL SUBMIT A COMPLETE SET OF THE PERMIT TO THE DEPARTMENT OF TRANSPORTATION, HIGHWAYS DIVISION, COUNTY OF HAWAII DISTRICT (HWY-M) PRIOR TO COMMENCING THE PERMITTED ACTIVITY. NO DEWATERING AND/OR HYDROTESTING ACTIVITIES WILL BE AUTHORIZED UNTIL THE RECEIPT OF THE NPDES PERMIT(S) FROM THE DOH.

7. THE CONTRACTOR MAY DISCUSS THE PROPOSED AND IMPLEMENTED BMP MEASURES AND THE ADEQUACY OF THEM, WITH THE DISTRICT ENGINEER.

# STRUCTURAL BEST MANAGEMENT PRACTICES:

## STRUCTURAL BEST MANAGEMENT PRACTICES:

EXAMPLES OF STRUCTURAL BMPS INCLUDE, BUT ARE NOT LIMITED TO:

- SILT FENCES
- COVERINGS
- FILTER BERMS
- STABILIZED CONSTRUCTION ENTRANCE/EXIT
- VEGETATIVE STABILIZATION
- SEDIMENT TRAPS
- INLET PROTECTION
- SEDIMENT BASINS

1. INSPECT BMPS PRIOR TO FORECAST RAIN, DAILY DURING EXTENDED RAIN EVENTS, ONCE EVERY 7 CALENDAR DAYS, AND WITHIN 24 HOURS AFTER A STORM EVENT OF 0.25 INCHES OR GREATER.

2. IF REPAIRS TO OR MAINTENANCE OF THE CONTRACTOR'S EROSION CONTROL MEASURES ARE NECESSARY, THE CONTRACTOR SHALL INITIATE THE REPAIRS OR MAINTENANCE WITHIN 24 HOURS AFTER INSPECTION AND NOTING OF THE DEFICIENCY.

REPAIRS AND MAINTENANCE MAY INCLUDE THE FOLLOWING:

- a. REPLACING SILT FENCE FABRIC WHEN TEARS ARE FOUND AND ENSURING THAT THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS AND FIRMLY IN THE GROUND.
- b. REMOVING AND DISPOSING OF SEDIMENT MATERIAL WHEN SEDIMENT BUILD-UP REACHES ONE-THIRD (1/3) THE HEIGHT OF THE SEDIMENT CONTROL MEASURE.
- c. REMOVING AND DISPOSING OF SEDIMENT MATERIAL WHEN THE DEPTH IN THE INSTALLED EROSION CONTROL MEASURES REACHES TEN PERCENT (10%) OF THE DESIGN CAPACITY.
- d. RESTORING BARE SPOTS AND WASHOUTS AND ENSURING HEALTHY PLANT GROWTH IN BOTH TEMPORARY AND PERMANENT SEEDED AND PLANTED AREAS.

3. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO INSTALL STRUCTURAL BMPS AS NEAR THE POLLUTANT SOURCE AS PRACTICABLE. INLET PROTECTION SHALL SERVE AS THE LAST MEASURE TO PREVENT POLLUTANTS FROM ENTERING THE STORM DRAIN SYSTEM.

# DUST CONTROL

1. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE MEASURES IT WILL TAKE FOR THE CONTROL OF FUGITIVE DUST FROM THE WORK SITE. THE MEASURES MAY INCLUDE BUT NOT BE LIMITED TO THE INSTALLATION OF DUST SCREENS, WATERING OF THE SITE, FILL MATERIAL BEING PLACED, AND DELAYING WORK IN THE WEEK THAT PREVAILING WIND DIRECTION SHOULD SHIFT.

NOTES:

1. WHEN JOINING TWO SECTIONS OF FILTER SOCK, A MINIMUM OF 2 FEET SHOULD BE MADE SO THAT FILTER SOCK SIT SIDE BY SIDE

2. CONTRACTOR SHALL REMOVE ANY DEBRIS IN PATH OF FILTER SOCK TO ENSURE GOOD GROUND CONTACT.

3. COMPOST SHALL NOT CONTAIN BIOSOLIDS AND SHOULD BE CONSISTENT WITH EPA GUIDELINES.

4. SHOULD THE FILTER FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE FILTER SOCK STILL BE NECESSARY, THE FILTER SOCK SHALL BE REPLACED PROMPTLY.

5. CONTRACTOR TO PROVIDE 4' MINIMUM CLEARANCE AT ALL SIDEWALKS.

# EROSION CONTROL/SEDIMENT CONTROL NOTES

1. THE CONTRACTOR SHALL FOLLOW THE GUIDELINES IN THE CITY AND COUNTY OF HONOLULU'S "RULES RELATING TO WATER QUALITY"

2. MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE ANY CONSTRUCTIONS IS INITIATED.

3. SLOPE PROTECTION IS REQUIRED ON AREAS WITH SLOPES GREATER THAN 15% AND ON AREAS OF MODERATE SLOPE THAT AREA PRONE TO EROSION UNLESS THEY ARE BEING ACTIVELY WORKED. USE DIVERSION UPSTREAM OF SLOPE (DIKES, SWALES SLOPE DRAINS) TO DIVERT WATER AROUND THE SLOPE. PROVIDE A 10-FT BUFFER ZONE AT THE TOE OF SLOPE. ONLY 5 ACRES MAY BE DISTURBED AT ANYTIME ON SLOPE GREATER THAN 15%.

4. TEMPORARY STABILIZATION: TEMPORARY STABILIZATION IS REQUIRED ON DISTURBED AREAS WHICH ARE AT FINAL GRADE OR WHEN THE DISTURBED AREA WILL NOT BE WORKED FOR 14 CONSECUTIVE DAYS OR MORE.

5. PERMANENT STABILIZATION: ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED USING VEGETATIVE COVERING, PAVEMENT, OR EQUIVALENT. PRIOR TO REMOVING EROSION AND SEDIMENT MEASURES, TRAPPED SEDIMENT AND AREAS OF DISTURBED SOIL WHICH RESULT FROM THE REMOVAL OF THE TEMPORARY MEASURES SHALL BE IMMEDIATELY AND PERMANENTLY STABILIZED.

6. PRESERVE EXISTING VEGETATION: CLEARLY MARK THE AREAS TO BE PRESERVED WITH FLAGS OR TEMPORARY FENCING. WHERE TEMPORARY FENCING IS USED, FENCING MUST BE ADEQUATELY SUPPORTED BY POSTS AND MAINTAINED IN AN UPRIGHT POSITION.

7. AREAS WHERE FINAL STABILIZATION OR INFILTRATION PRACTICES WILL BE INSTALLED SHALL BE PROTECTED FROM EXCESSIVE COMPACTION DURING CONSTRUCTION. VEHICLE AND EQUIPMENT USE SHALL BE RESTRICTED OR TECHNIQUES TO CONDITION THE SOIL TO SUPPORT VEGETATION SHALL BE IMPLEMENTED IN THE AREAS. CLEARLY MARK THE AREAS TO BE AVOIDED WITH FLAGS OR TEMPORARY FENCING. WHERE TEMPORARY FENCING IS USED, FENCING MUST BE ADEQUATELY SUPPORTED BY POSTS AND MAINTAINED IN AN UPRIGHT POSITION.

8. PERIMETER CONTROLS: PERIMETER CONTROLS ARE REQUIRED DOWNSLOPE OF ALL DISTURBED AREAS. MAINTAIN DOWNSTREAM VEGETATED BUFFER AREAS.

#### 9. INLET PROTECTION:

- ALL STORM DRAIN INLETS ONSITE AND THOSE OFFSITE WHICH MAY RECEIVE RUNOFF FROM THE SITE SHALL USE AN INLET PROTECTION DEVICE UNLESS THEY ARE DIRECTED TO SEDIMENT BASIN.
- SEDIMENTS LEVELS MAY NOT EXCEED ONE THIRD OF THE HEIGHT OF A SEDIMENT BARRIER OR INLET PROTECTION DEVICE AT ANY POINT ALONG THE LENGTH OF THE SEDIMENT BARRIER OR THE INLET PROTECTION DEVICE.
- SEDIMENT BARRIERS AND INLET PROTECTION DEVICES MUST BE UNCLOGGED AND CLEANED WHEN PERFORMANCE IS COMPROMISED
- TORN, WEATHERED OR SAGGING SEDIMENT BARRIERS OR INLET PROTECTION DEVICES MUST BE REPAIRED OR REPLACED IMMEDIATELY.

#### 10. TRACKING CONTROL



- MINIMIZE SEDIMENT TRACK-OUT ONTO OFF-SITE STREETS, OTHER PAVED AREAS, AND SIDEWALKS FROM VEHICLES EXITING THE CONSTRUCTION SITE BY RESTRICTING VEHICLE TRAFFIC TO PROPERLY DESIGNATED AREAS AND USING ADDITIONAL CONTROLS TO REMOVE SEDIMENT FROM VEHICLE TIRES PRIOR TO EXITING THE SITE.
- VEHICULAR PARKING AND MOVEMENTS ON PROJECT SITES MUST BE CONFINED TO PAVED SURFACES OR PREDEFINED PARKING AREAS AND VEHICLE PATHS, WHICH SHALL BE MARKED WITH FLAGS OR BOUNDARY FENCING.
- ALL POLLUTANTS AND MATERIALS THAT ARE DROPPED, WASHED, TRACKED, SPILLED, OR OTHERWISE DISCHARGED FROM A PROJECT SITE TO OFF-SITE STREETS, OTHER PAVED AREAS, SIDEWALKS OR THE MS4 MUST BE CLEANED USING DRY METHODS SUCH AS SWEEPING OR VACUUMING.

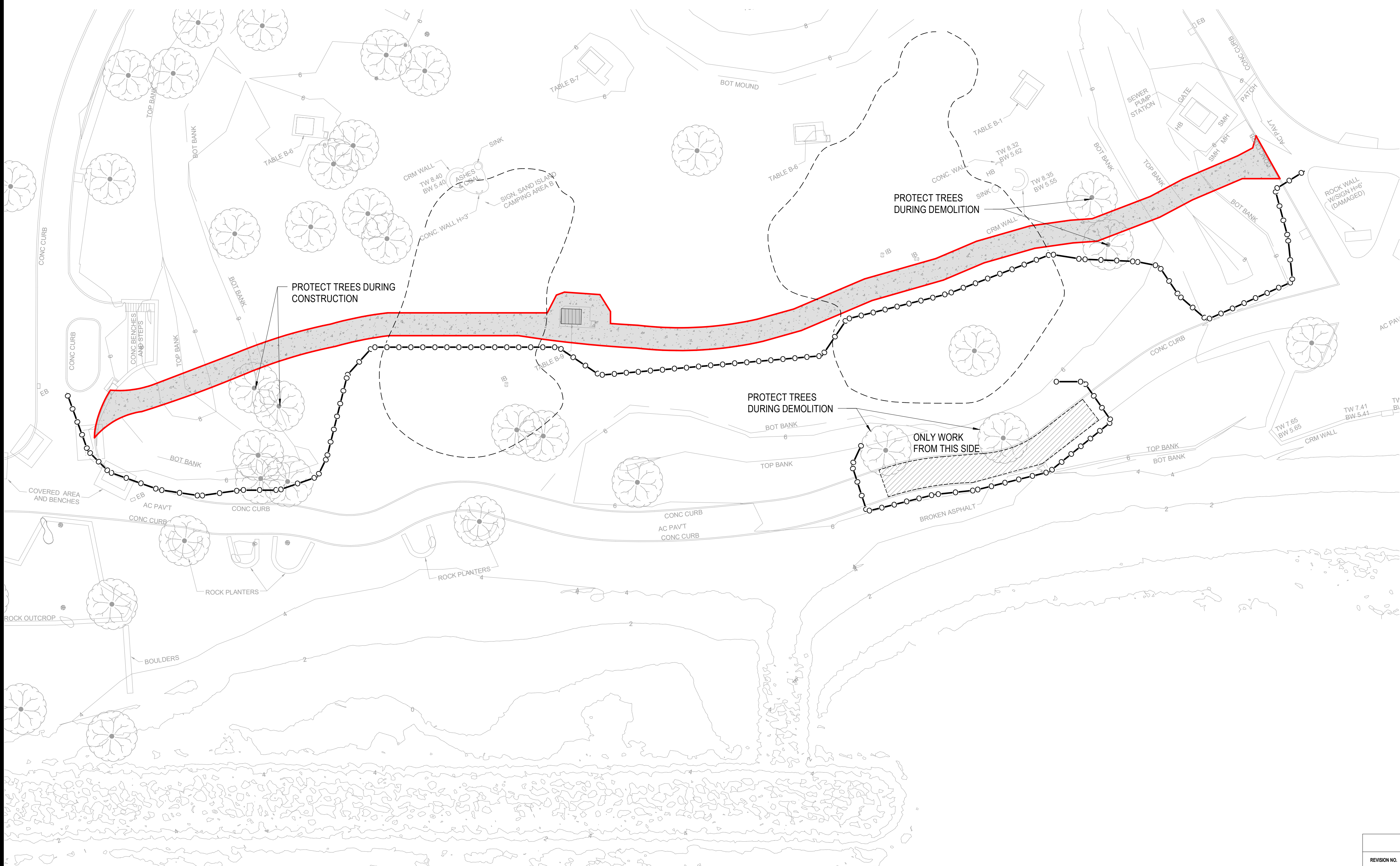
11. BEST MANAGEMENT PRACTICES (BMPS) SHALL NOT BE REMOVED UNTIL FINAL STABILIZATION IS COMPLETE FOR THE PHASE.

12. REFER TO CITY AND COUNTY OF HONOLULU BEST MANAGEMENT PRACTICES MANUAL - CONSTRUCTION, FOR MORE INFORMATION ON BMPS.

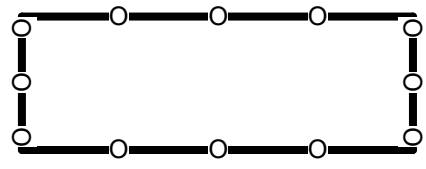
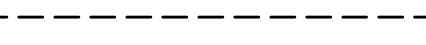



#### 13. BMP AND SITE MAINTENANCE.

- REGULARLY INSPECT AND MAINTAIN REQUIRED EROSION AND SEDIMENT CONTROL MEASURES TO ENSURE CONTINUED PERFORMANCE.
- THE PLACEMENT OF ADDITIONAL DEVICES TO REDUCE EROSION DAMAGE AND CONTAIN POLLUTANTS WITHIN THE SITE IS LEFT TO THE DISCRETION OF THE CONTRACTOR AND ESP COORDINATOR. ADDITIONAL DEVICES AS NEEDED SHALL BE INSTALLED TO RETAIN SEDIMENTS AND OTHER POLLUTANTS ON SITE.
- STORM WATER POLLUTION AND EROSION CONTROL DEVICES ARE TO BE MODIFIED, AS NEEDED, AS THE PROJECT PROGRESSES. THE DESIGN AND PLACEMENT OF THESE DEVICES IS THE RESPONSIBILITY OF THE CONTRACTOR AND ESP COORDINATOR PLANS REPRESENTING CHANGES MUST BE SUBMITTED FOR APPROVAL IF REQUESTED BY CITY OFFICIALS.
- ALL LOOSE SOILS AND DEBRIS THAT MAY CREATE A POTENTIAL HAZARD TO OFF-SITE PROPERTIES SHALL BE STABILIZED OR REMOVED FROM THE SITE ON A DAILY BASIS.
- ALL SILT AND DEBRIS SHALL BE REMOVED FROM ALL DEVICES WITHIN 24 HOURS AFTER EACH RAINSTORM AND BE DISPOSED OF PROPERLY.
- EVERY EFFORT SHOULD BE MADE TO ELIMINATE THE DISCHARGE OF NON-STORMWATER FROM THE PROJECT SITES AT ALL TIMES
- SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS MUST BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC WAY. ACCIDENTAL DEPOSITIONS MUST BE SWEEP UP IMMEDIATELY AND MAY NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
- ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION MUST BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:
				<b>STATE OF HAWAII</b> <b>DEPARTMENT OF LAND AND NATURAL RESOURCES</b> <b>ENGINEERING DIVISION</b> <b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> <b>TAX MAP KEY: 1-5-041:006</b>	
<b>EROSION AND SEDIMENT CONTROL NOTES</b>					
DESIGNED: JS					
DRAWN: G70		SUBMITTED: BID SUBMITTAL		DL	
CHECKED: KC		DATE: 04/13/2026			
APPROVED: -		SCALE: AS NOTED			
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION		Dina Lau E-signed 2026-04-17 08:22AM HST dina.u.lau@hawaii.gov State of Hawaii Civil Engineer		 <b>C001</b>	



**LEGEND:**

-  FILTER SOCK PERIMETER CONTROL, FOR DETAIL SEE SHEET C003
-  APPROXIMATE LIMITS OF PONDING AREA
-  (E) PARK TABLE
-  (E) ASPHALT PATHWAY
-  SIDEWALK SECTION REMOVAL

**PRE/DURING/POST CONSTRUCTION BMPs:**

PRE-CONSTRUCTION BMPs INCLUDE THE FOLLOWING:

1. STABILIZED CONSTRUCTION INGRESS/EGRESS
2. SEDIMENT FILTER FOR DRAIN INLETS
3. FILTER SOCK
4. DUST CONTROL

DURING CONSTRUCTION BMPs INCLUDE THE FOLLOWING:


1. TEMPORARY SLOPE PROTECTION
2. TEMPORARY STABILIZATION
3. TEMPORARY SEDIMENT FILTER FOR PROPOSED INLETS

POST CONSTRUCTION BMPs INCLUDE THE FOLLOWING:

1. PERMANENT STABILIZATION

**1 EROSION CONTROL PLAN - BID ALT 4**  
 SCALE: 1" = 20'-0"  


REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:



EXPIRES 4/30/2028

STATE OF HAWAII  
 DEPARTMENT OF LAND AND NATURAL RESOURCES  
 ENGINEERING DIVISION

**SAND ISLAND SRA PARK IMPROVEMENTS PH. VI**  
 TAX MAP KEY: 1-5-041:006

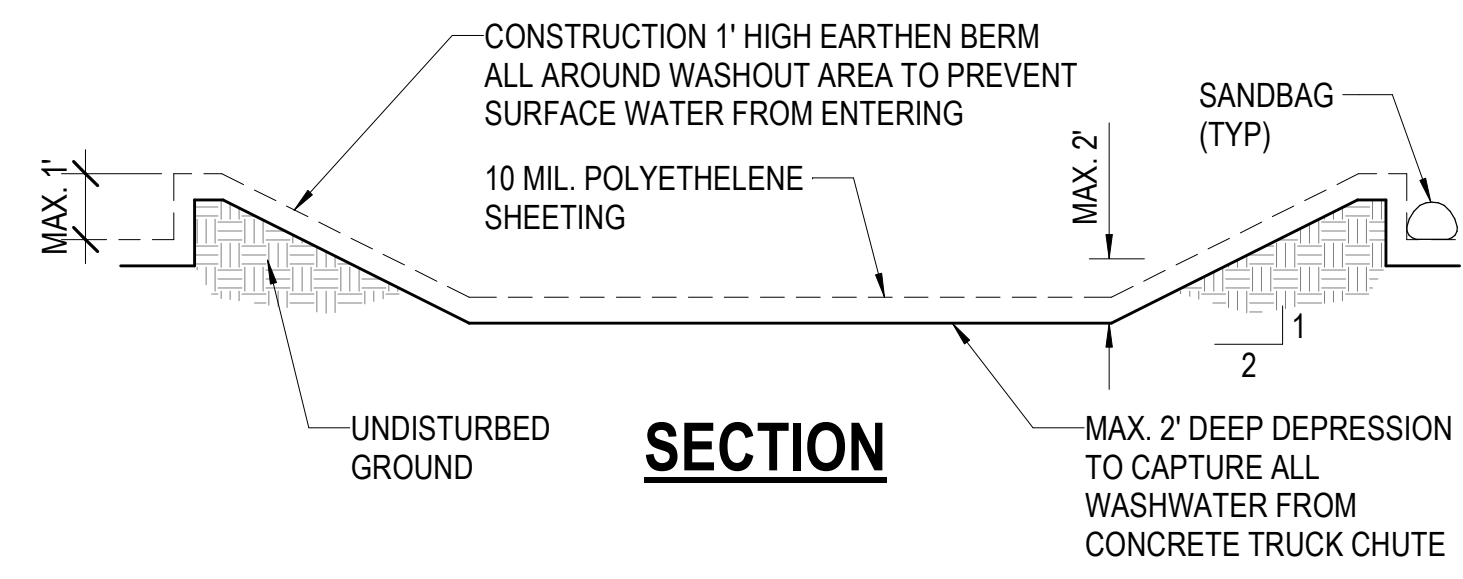
**EROSION CONTROL - OVERALL PLAN BID ALT 4**

DESIGNED: JS  
 DRAWN: G70  
 CHECKED: KC  
 APPROVED: -

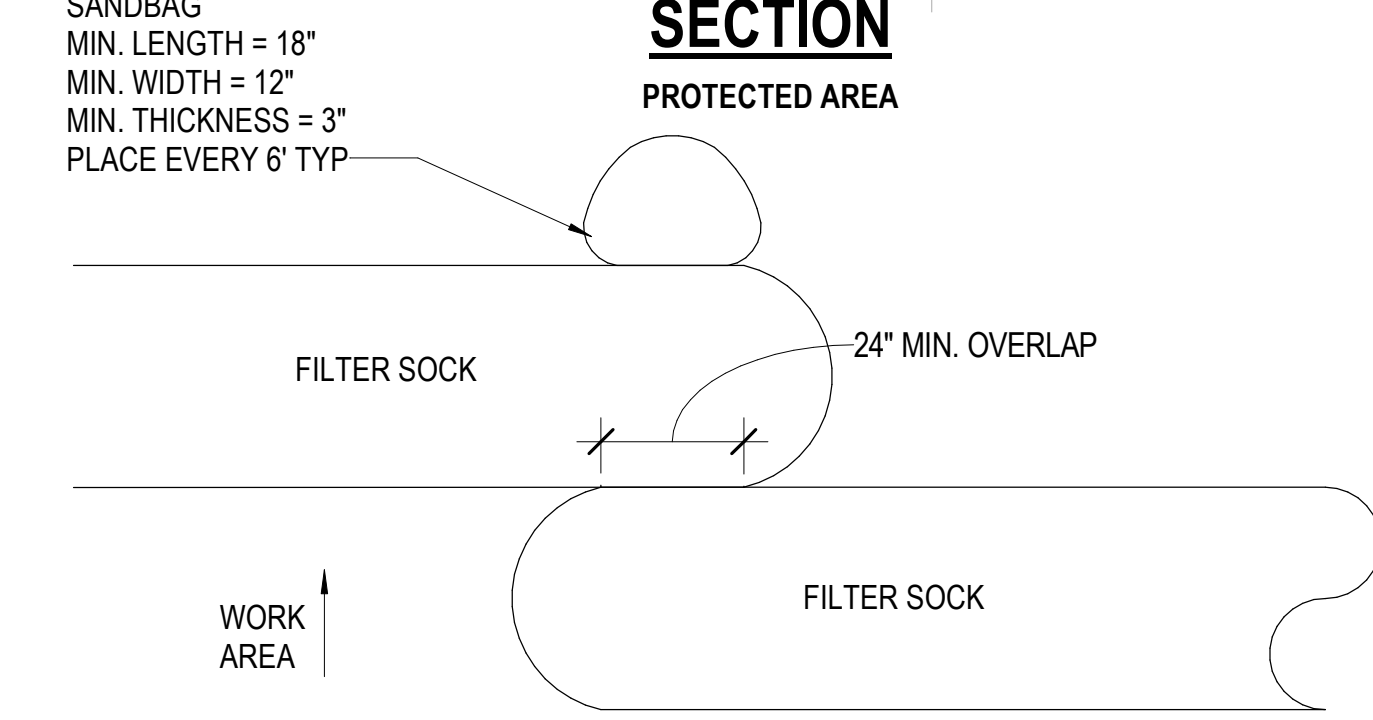
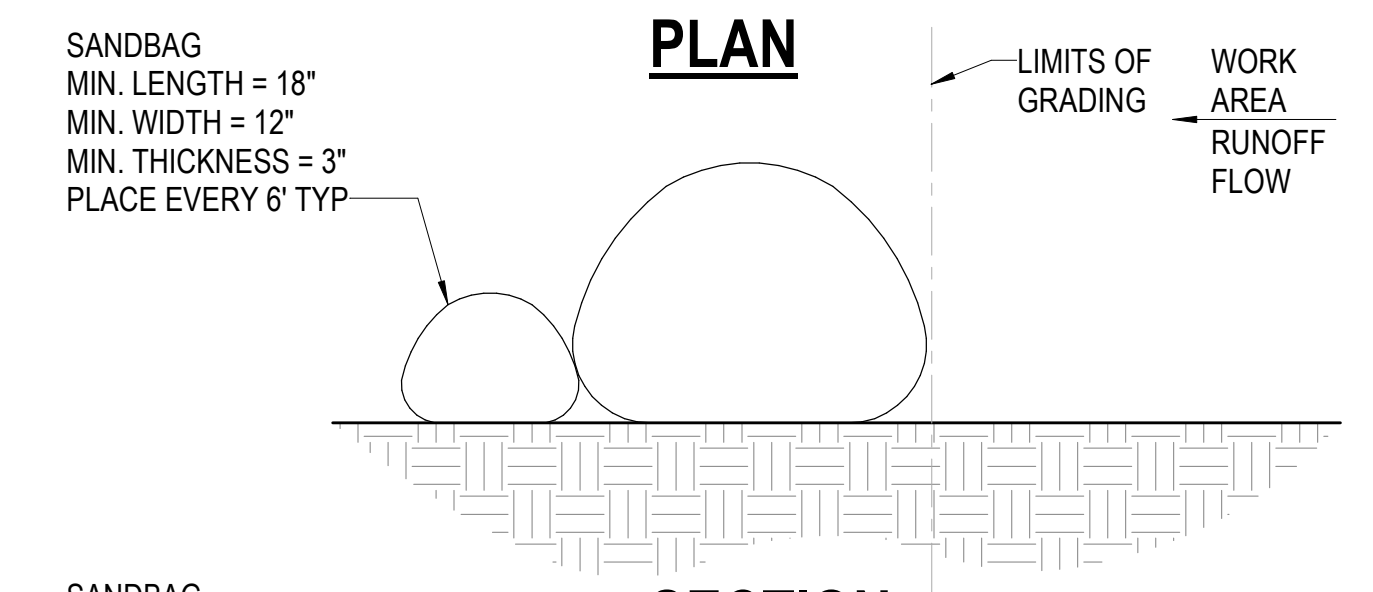
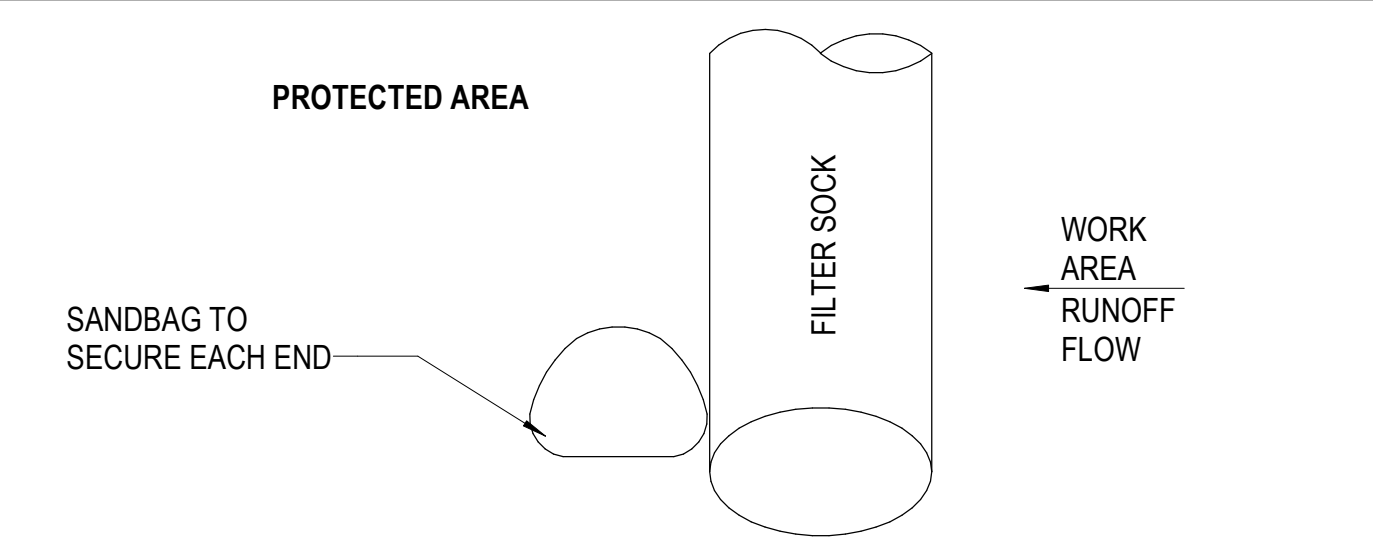
STATE OF HAWAII  
 Dina Lau  
 E-signed 2026-04-17 08:22AM HST  
 dina.u.lau@hawaii.gov  
 State of Hawaii  
 Civil Engineer

SUBMITTED: BID SUBMITTAL *DL*  
 DATE: 04/13/2026  
 SCALE: AS NOTED

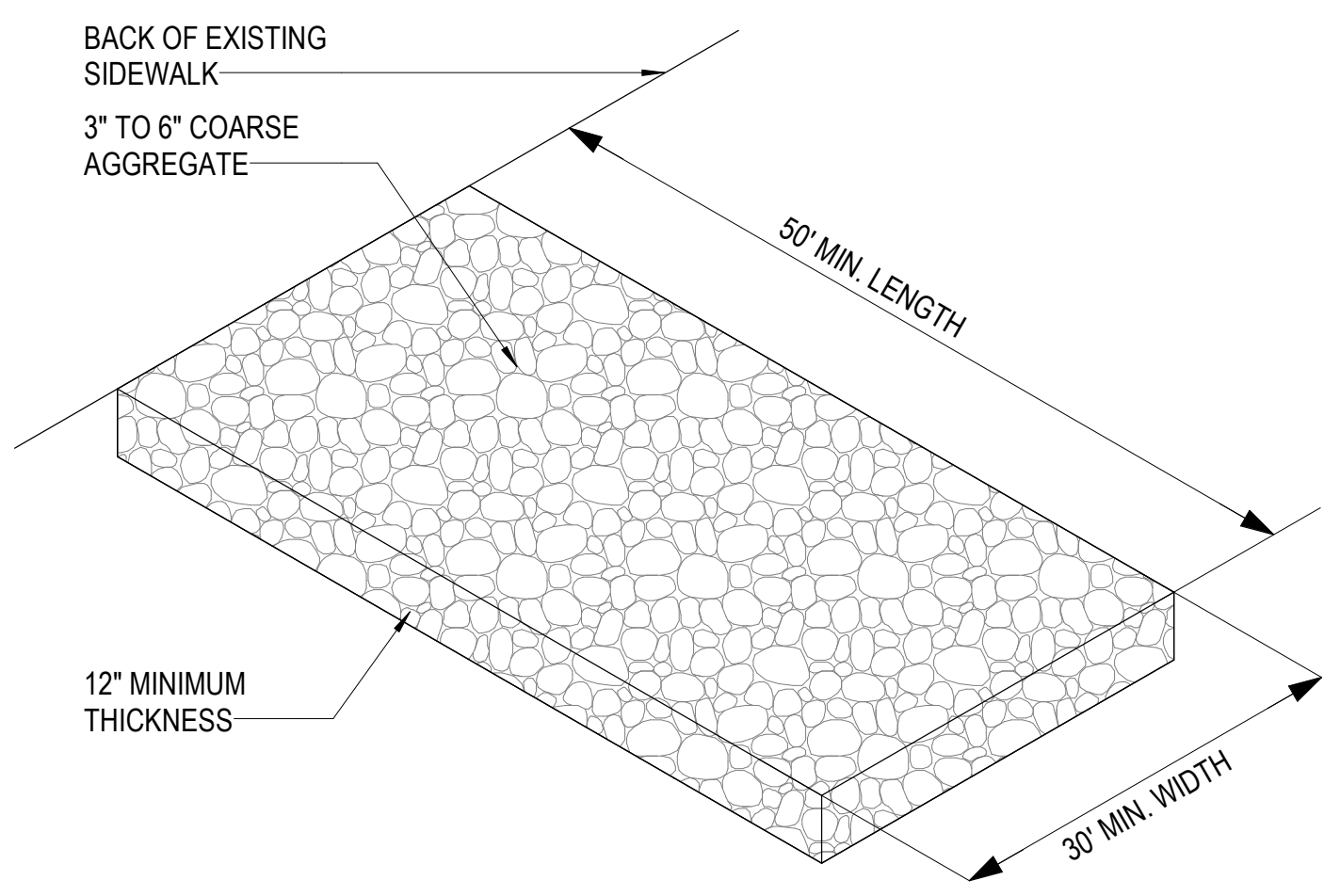
**C002**



**3 CONCRETE WASHOUT**  
SCALE: 1/2" = 1'-0"



**1 FILTER SOCK**  
SCALE: 1/2" = 1'-0"



LOCATE AT CONSTRUCTION ACCESS POINTS ADJACENT TO WATER SUPPLY TO REMOVE SEDIMENT FROM TIRES AND UNDER CARRIAGES TO PREVENT SEDIMENT FROM BEING TRANSPORTED. ANY SEDIMENT CARRIED FROM THE SITE ONTO THE STREET SHALL BE CLEANED UP IMMEDIATELY.

**2 GRAVEL CONTRCTR ENTRY/TIRE WASH STATION**  
SCALE: NOT TO SCALE

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**SAND ISLAND SRA PARK IMPROVEMENTS PH. VI**  
TAX MAP KEY: 1-5-041:006

**EROSION CONTROL DETAILS**

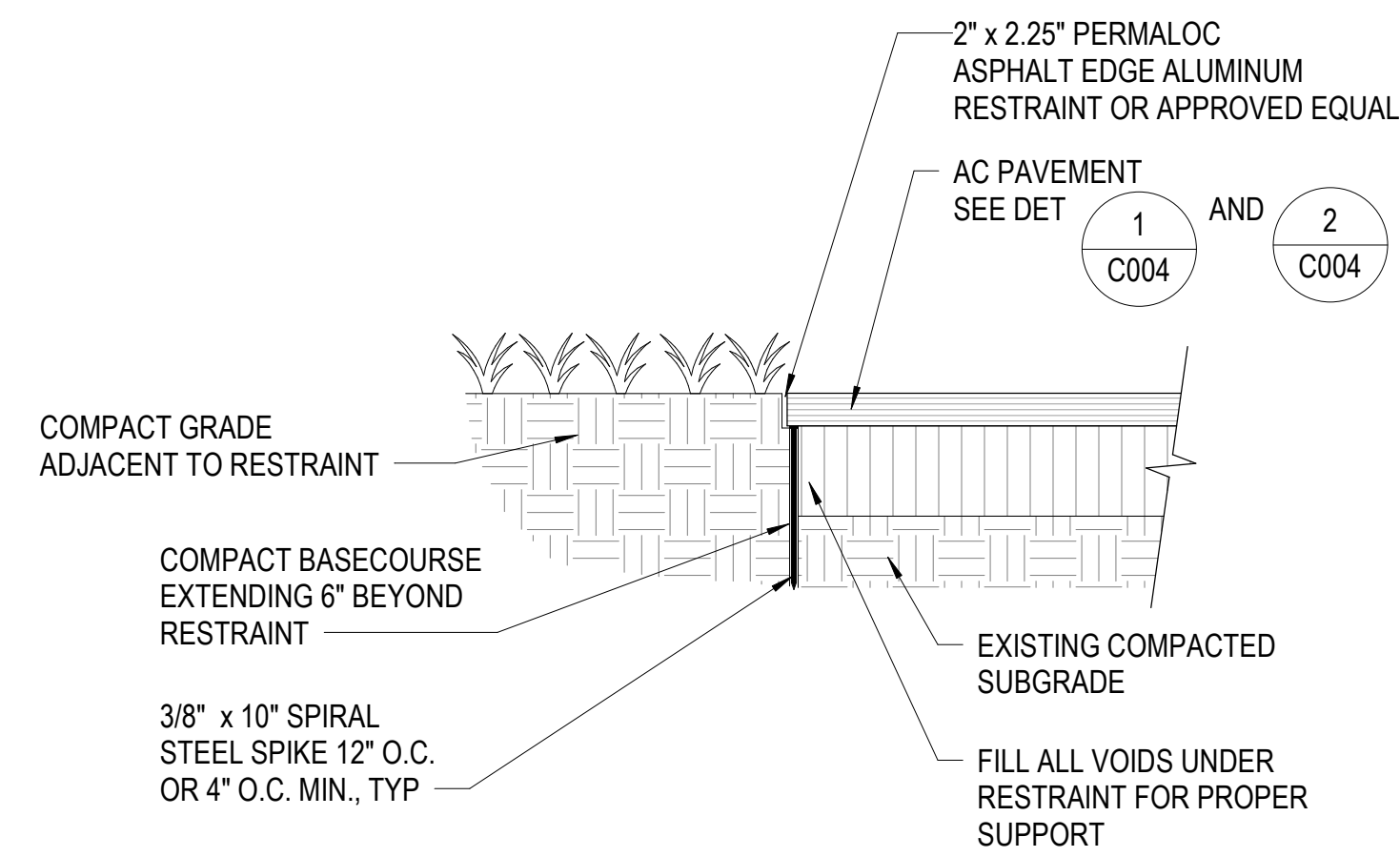
DESIGNED: JS  
DRAWN: G70  
CHECKED: KC  
APPROVED: -

DATE: 04/13/2026  
SCALE: AS NOTED

Dina Lau  
E-signed 2026-04-17 08:22AM HST  
dina.lau@hawaii.gov  
State of Hawaii  
Civil Engineer

**C003**

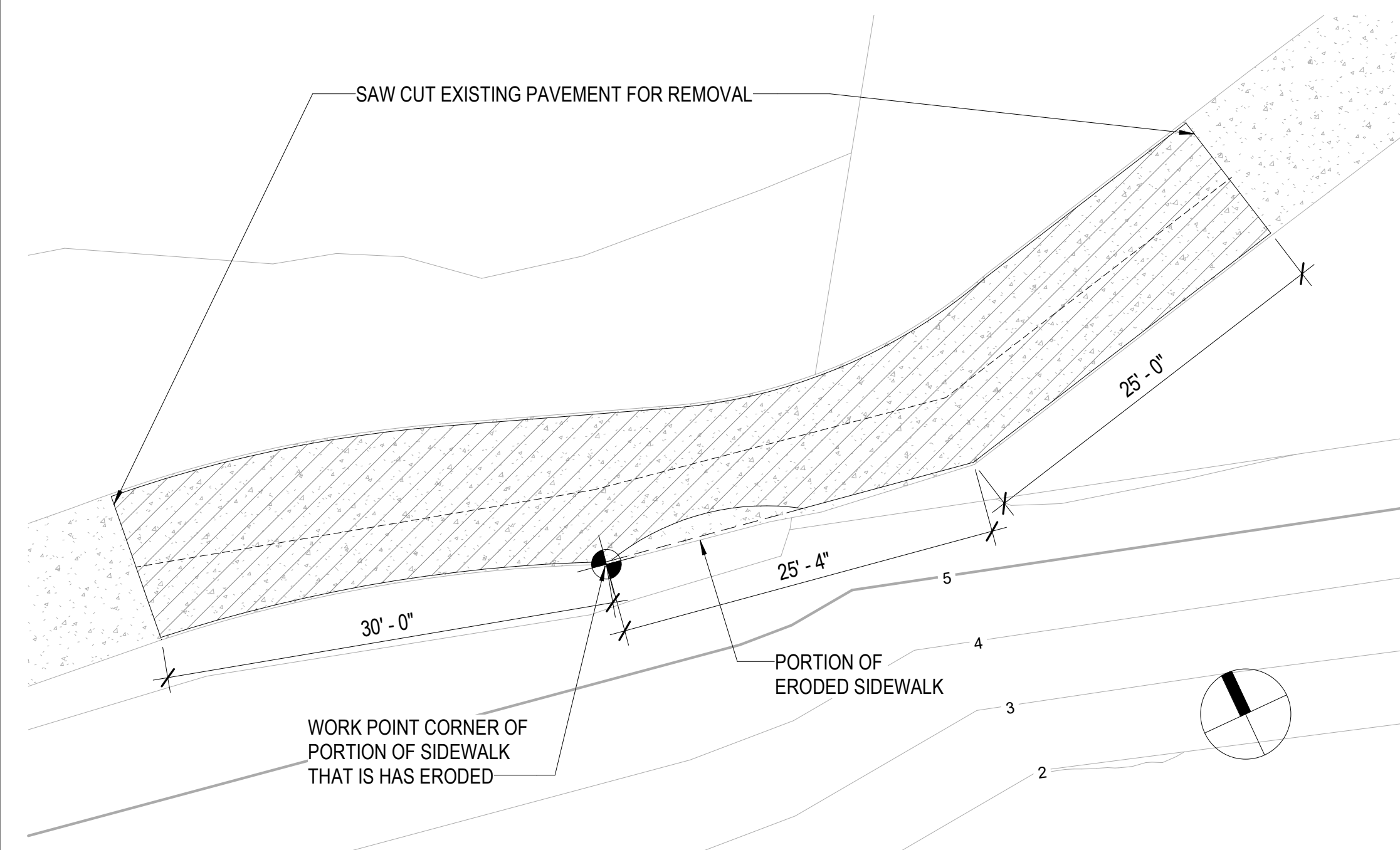
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION



**NOTES:**

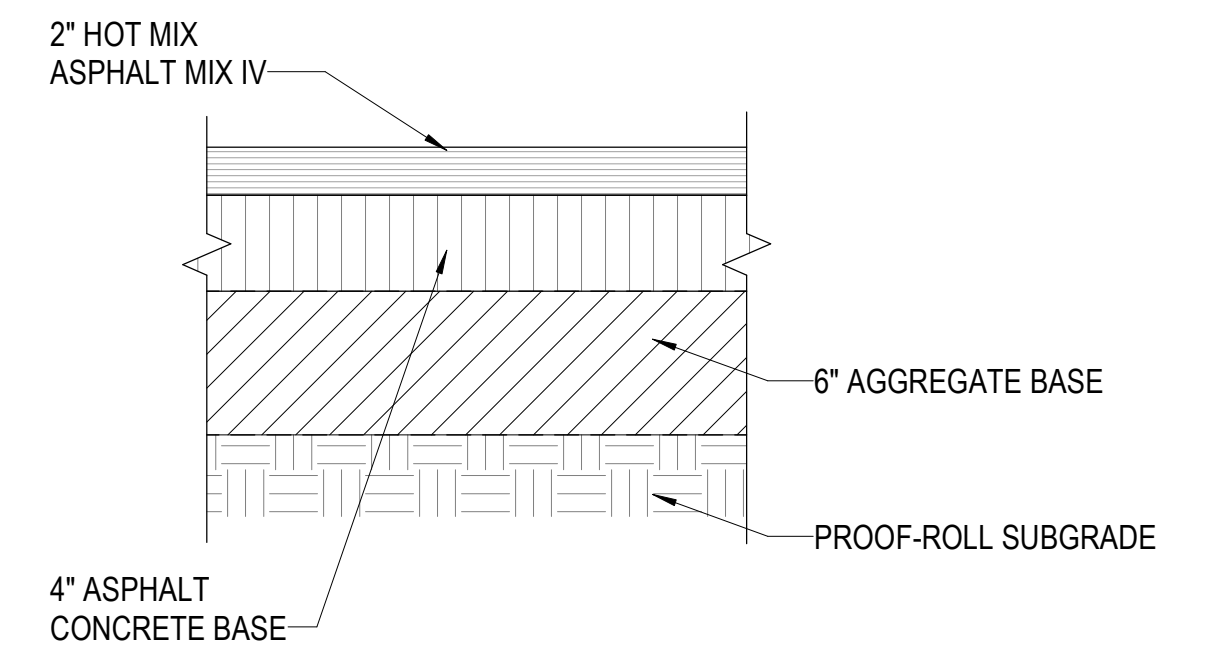
1. INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES.
2. 8'-0" SECTIONS CONNECTED WITH 4" SLIDING CONNECTOR.
3. MAINTAIN 3/8" GAP BETWEEN SECTIONS TO ALLOW FOR PRODUCT EXPANSION IN EXTREME TEMPERATURES.
4. CORNERS: NOTCH BASE ONLY AND FORM A CONTINUOUS CORNER.

**5 PERMALOC ASPHALT EDGE DETAIL**  
SCALE: NOT TO SCALE

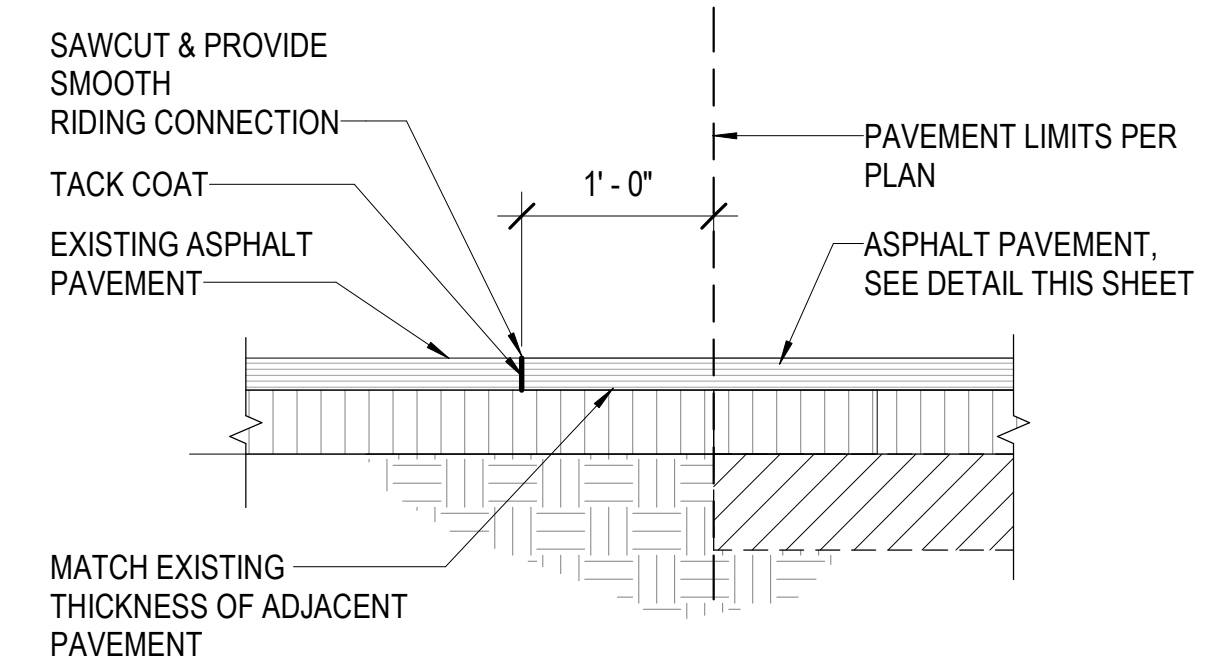


COASTAL WALKWAY DEMOLITION AND SUBGRADE STABILIZATION: CONTRACTOR SHALL FIELD-VERIFY EXTENT OF UNDERMINING AND PROTECT ADJACENT UTILITIES/STRUCTURES. IF VOIDS/UNDERMINING EXTEND BEYOND LIMITS SHOWN, OBTAIN ARCHITECT / ENGINEER'S APPROVAL PRIOR TO PROCEEDING. REMOVE PAVEMENT, BASE, AND UNSUITABLE SOILS; STABILIZE SUBGRADE AND INSTALL VEGETATIVE INFILL SYSTEM AS SPECIFIED; PROVIDE EROSION CONTROL AND TIDAL/SURGE PROTECTION DURING CONSTRUCTION.

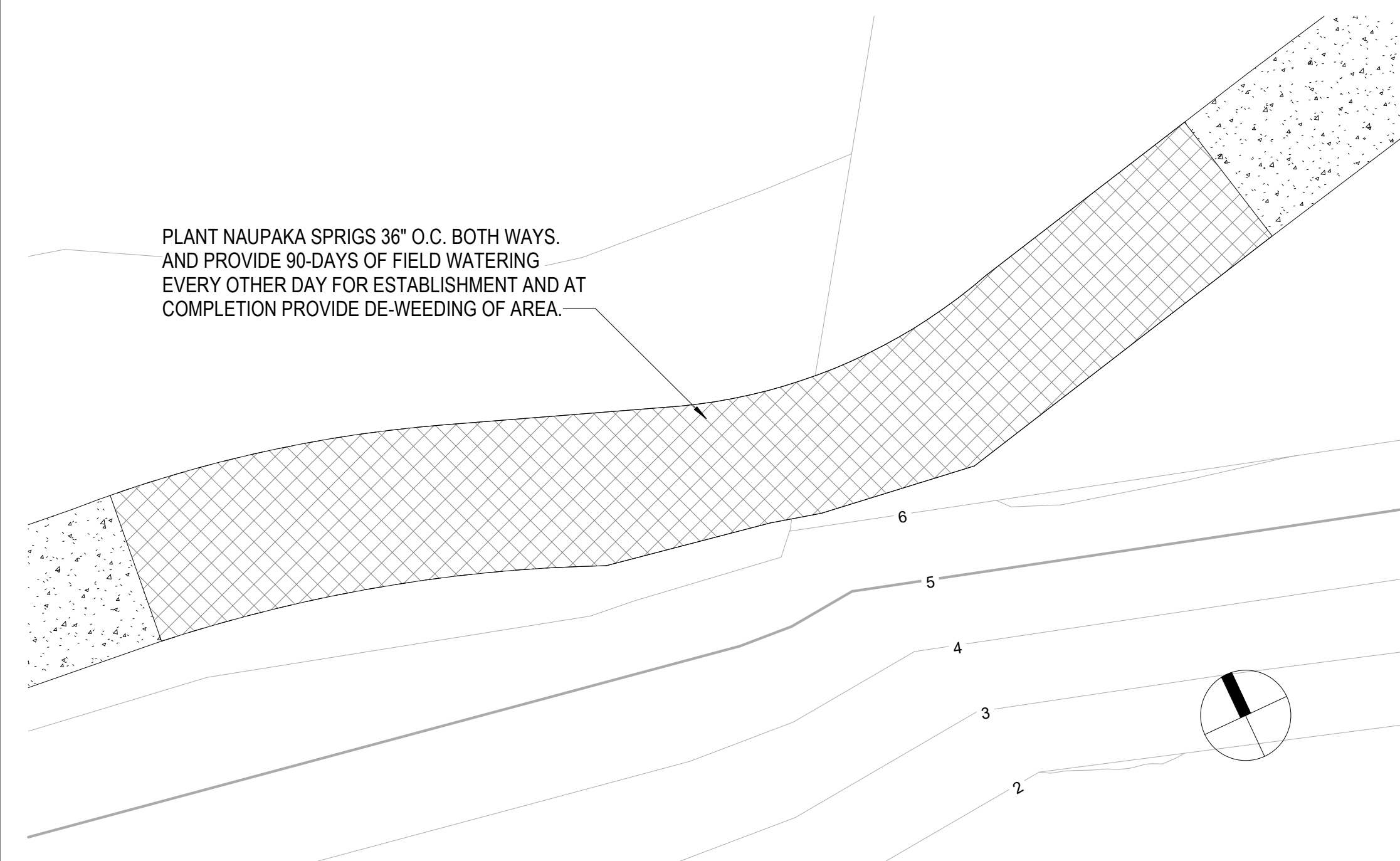
**3 SIDEWALK SECTION REMOVAL - PLAN**  
SCALE: 1/8" = 1'-0"



**1 ASPHALT CONCRETE PAVEMENT**  
SCALE: 1 1/2" = 1'-0"



**2 ASPHALT PAVEMENT CONNECTION**  
SCALE: 1" = 1'-0"



**4 SIDEWALK SECTION REVEGETATION**  
SCALE: 1/8" = 1'-0"

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:

EXPIRES 4/30/2028

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

**SAND ISLAND SRA PARK IMPROVEMENTS PH. VI**  
TAX MAP KEY: 1-5-041:006

**BID ALT 4 SITE DETAILS**

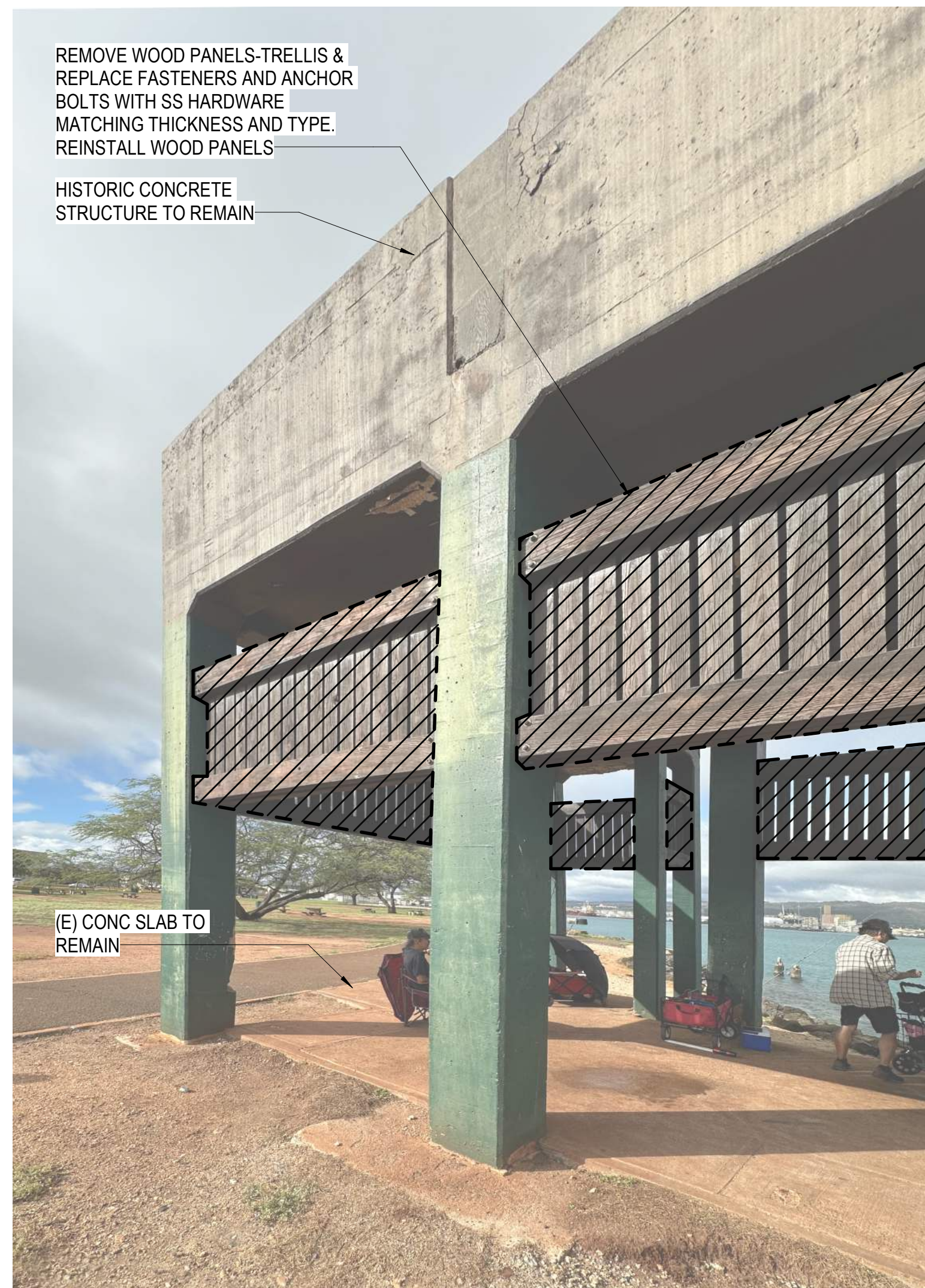
DESIGNED: JS  
DRAWN: G70  
CHECKED: KC  
APPROVED: -

DATE: 04/13/2026  
SCALE: AS NOTED

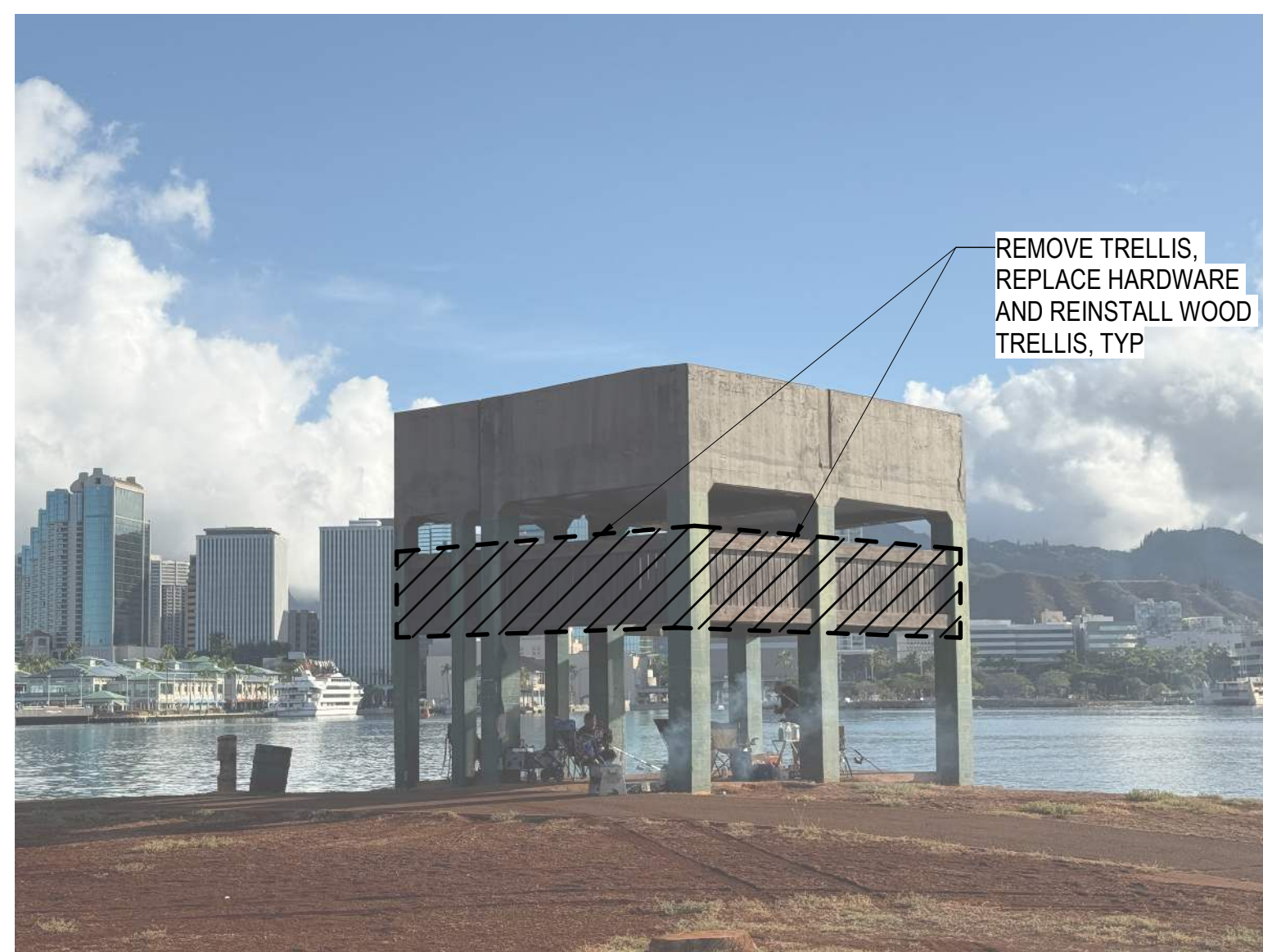
Submitted: BID SUBMITTAL *DL*

Dina Lau  
E-signed 2026-04-17 08:22AM HST  
dina.lau@hawaii.gov  
State of Hawaii  
Civil Engineer

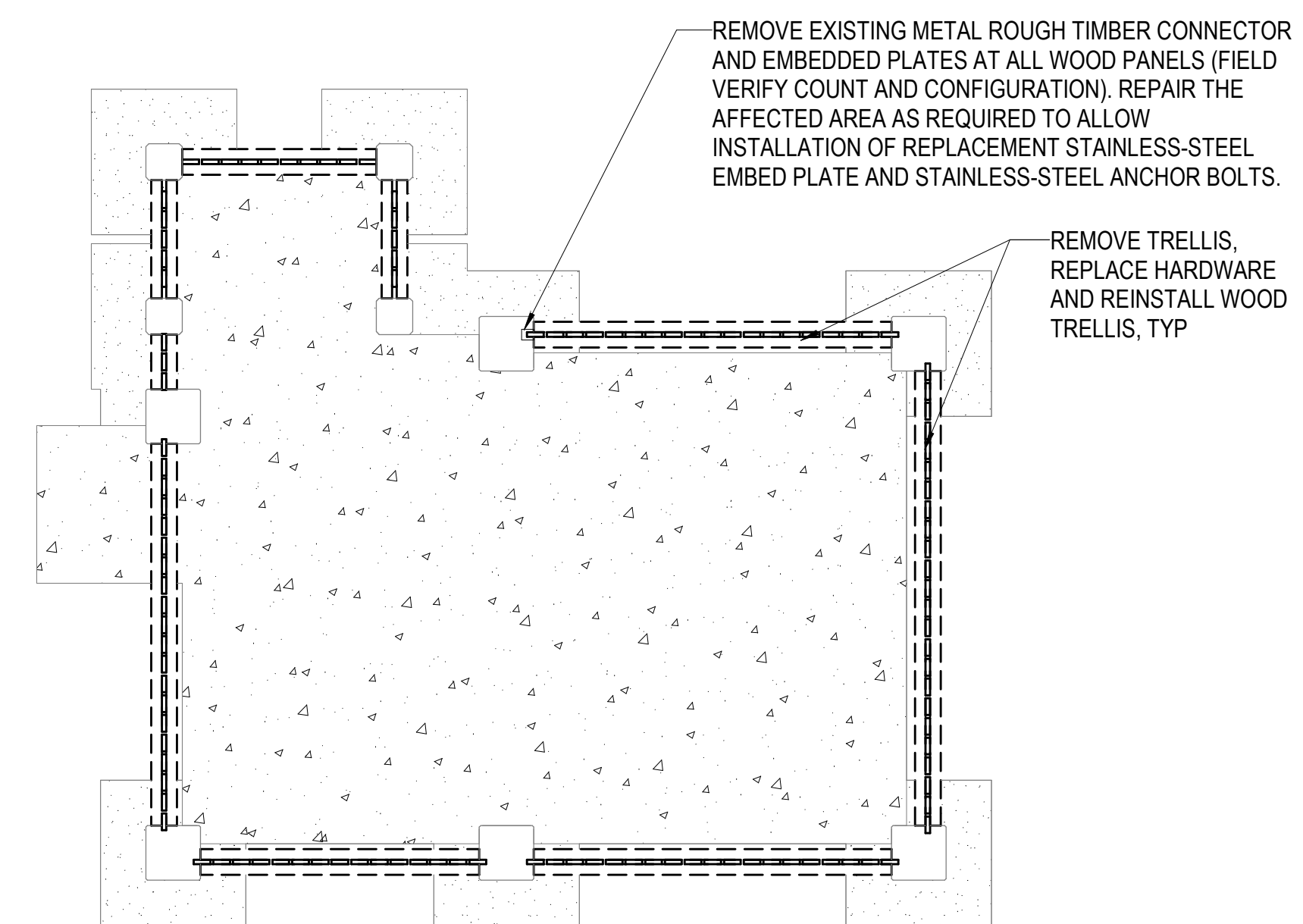
**C004**



**2** ANTI-AIRCRAFT GUN EMPLACEMENT TOWER EAST (PHOTO)  
SCALE: 3" = 1'-0"



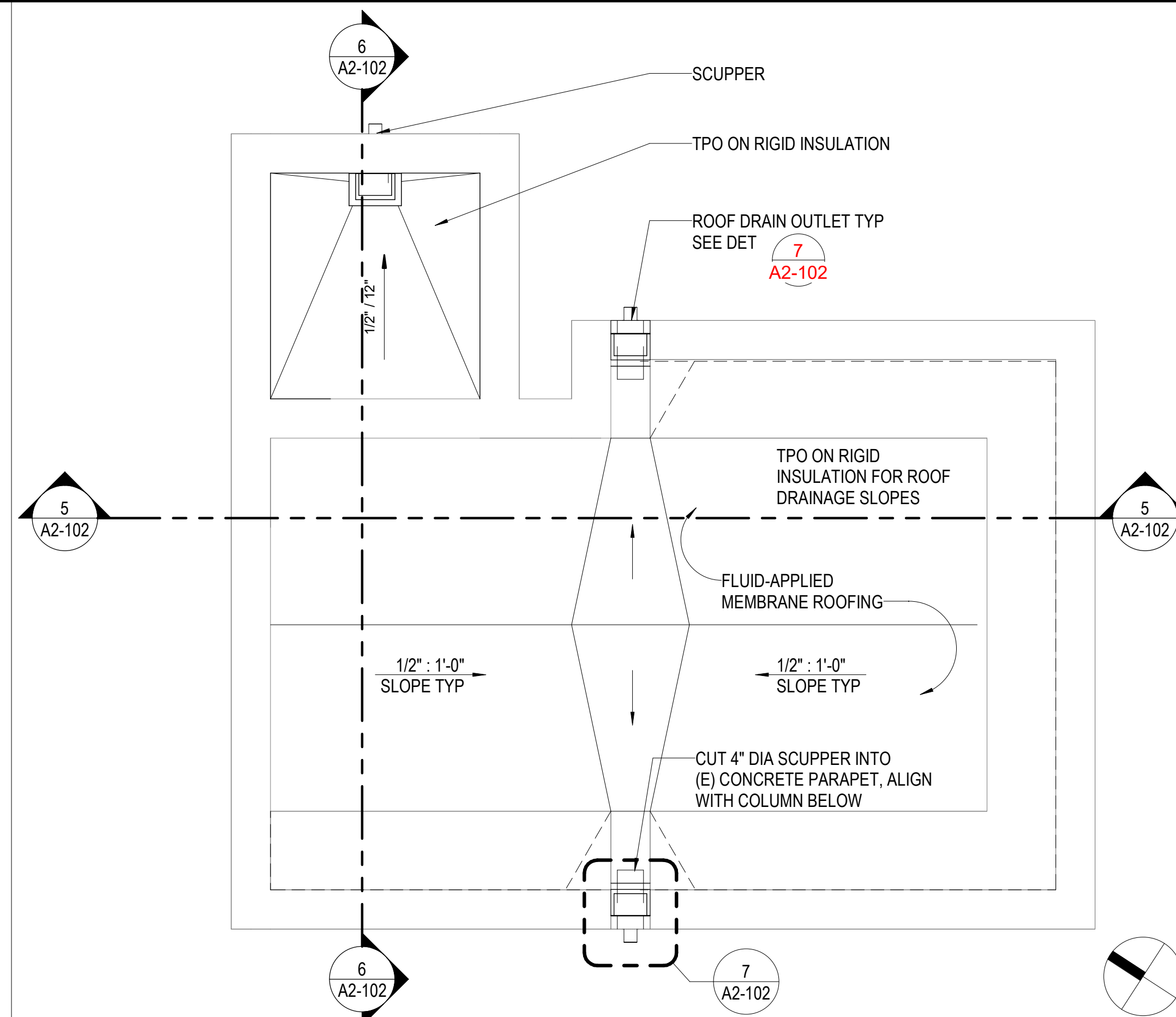
**3** ANTI-AIRCRAFT GUN EMPLACEMENT TOWER SOUTH (PHOTO)  
SCALE: 3" = 1'-0"



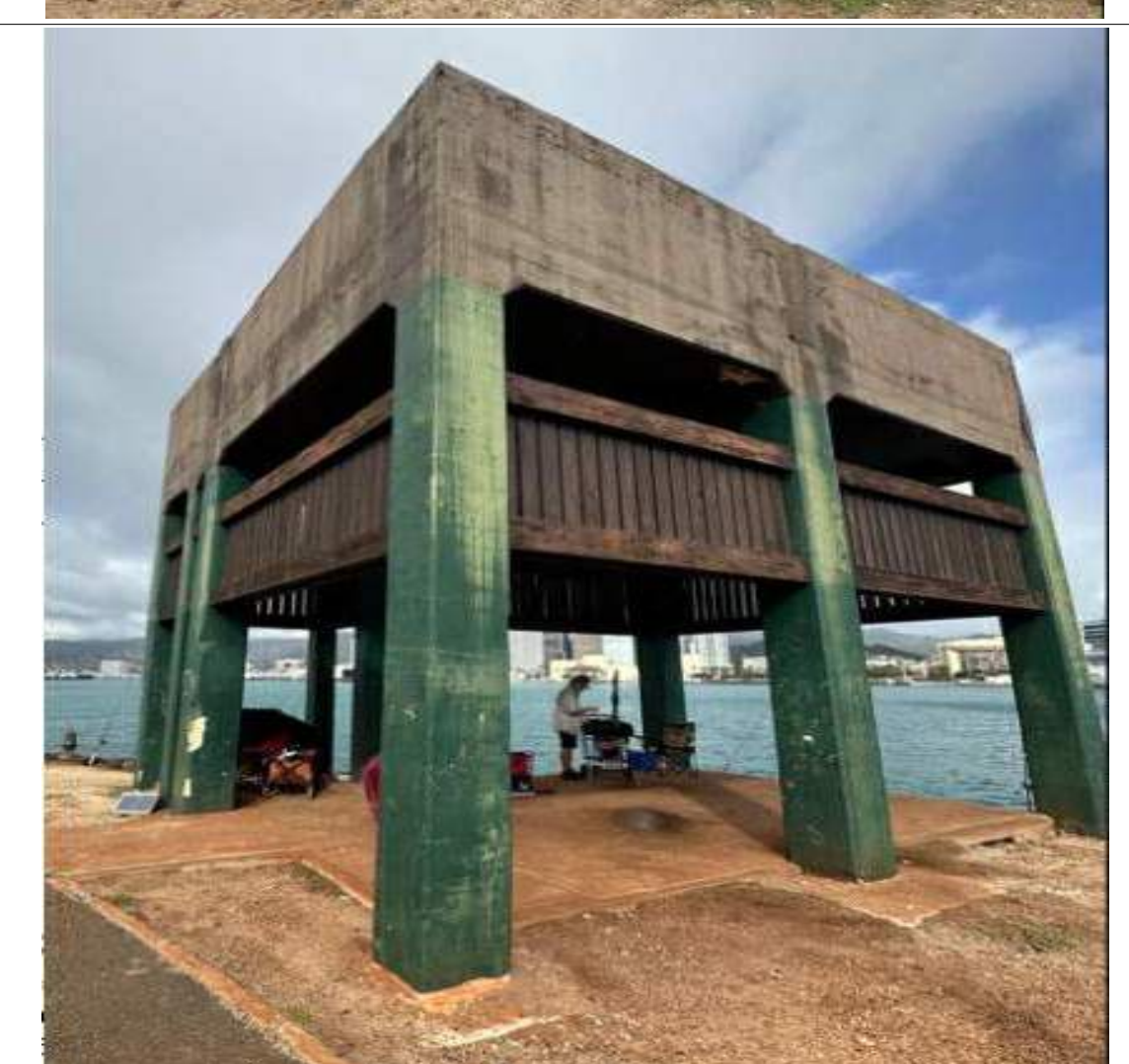
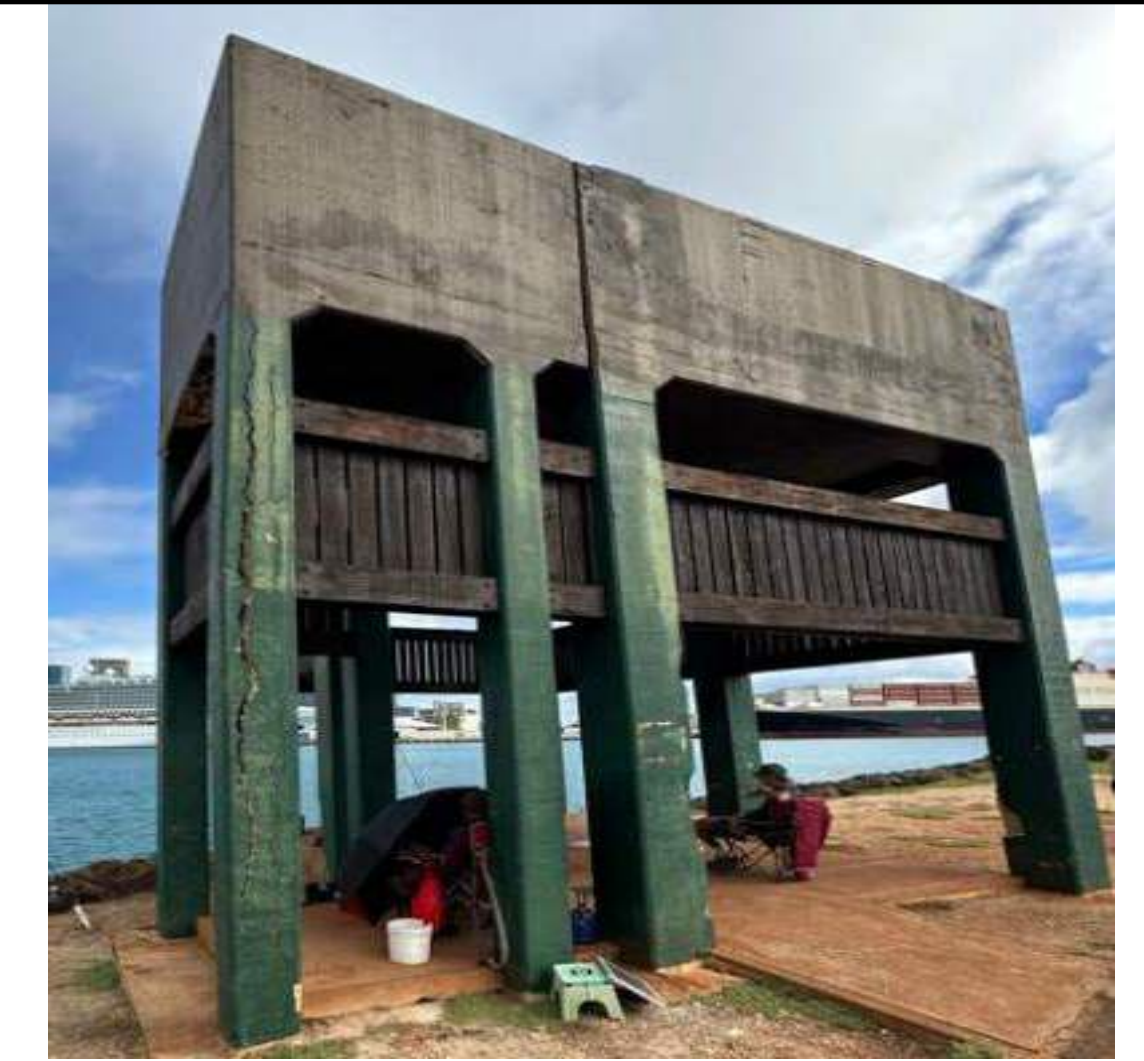
**1** EXISTING / DEMOLITION FLOOR PLAN  
SCALE: 1/4" = 1'-0"

DEMOLITION / HISTORIC PRESERVATION NOTE:  
SELECTIVE DEMOLITION SHALL BE UNDERTAKEN IN A MANNER THAT PRESERVES AND PROTECTS THE EXISTING HISTORIC CONCRETE STRUCTURE AND ITS CHARACTER-DEFINING FORM AND DETAILING. REMOVE ONLY NON-HISTORIC ELEMENTS AND LATER ALTERATIONS INDICATED FOR REMOVAL. METHODS SHALL BE NON-DESTRUCTIVE TO THE MAXIMUM EXTENT PRACTICABLE AND SHALL NOT IMPAIR THE ORIGINAL CONCRETE MASSING, GEOMETRY, EDGES, REVEALS, OR SURFACE EXPRESSION. ALL EXPOSED EDGES RESULTING FROM SELECTIVE DEMOLITION SHALL BE NEATLY CUT, FINISHED, AND FREE OF JAGGED OR SHARP EDGES. CONTRACTOR SHALL ENSURE THAT NO HAZARDOUS CONDITIONS ARE CREATED DURING OR AFTER DEMOLITION, AND ALL SURFACES SHALL BE LEFT IN A SAFE, STABLE, AND WORKMANLIKE CONDITION. UPON COMPLETION OF REMOVALS, PREPARE THE EXPOSED HISTORIC CONCRETE TO RECEIVE SPECIFIED CEMENT WASH AND PAINT FINISH TO RESTORE THE VISUAL INTEGRITY AND HISTORIC READING OF THE ORIGINAL CONCRETE CONSTRUCTION. PATCH, REPAIR, OR REPLACEMENT OF DAMAGED HISTORIC CONCRETE CAUSED BY DEMOLITION OPERATIONS WILL NOT BE PERMITTED WITHOUT ARCHITECT REVIEW AND APPROVAL. SEE ADDITIONAL REQUIREMENT IN PROJECT SPECIFICATION.

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:
<p>STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION</p> <p><b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006 <b>ANTI-AIRCRAFT GUN EMPLACEMENT TOWER DEMOLITION SCOPE</b></p>					
DESIGNED:	JS				
DRAWN:	G70	SUBMITTED: BID SUBMITTAL	DL		
CHECKED:	KC	DATE:	04/13/2026		
APPROVED:		SCALE:	AS NOTED		
<p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION</p>		<p>Dina Lau E-signed 2026-04-17 08:22AM HST dina.u.lau@hawaii.gov State of Hawaii Civil Engineer</p>			



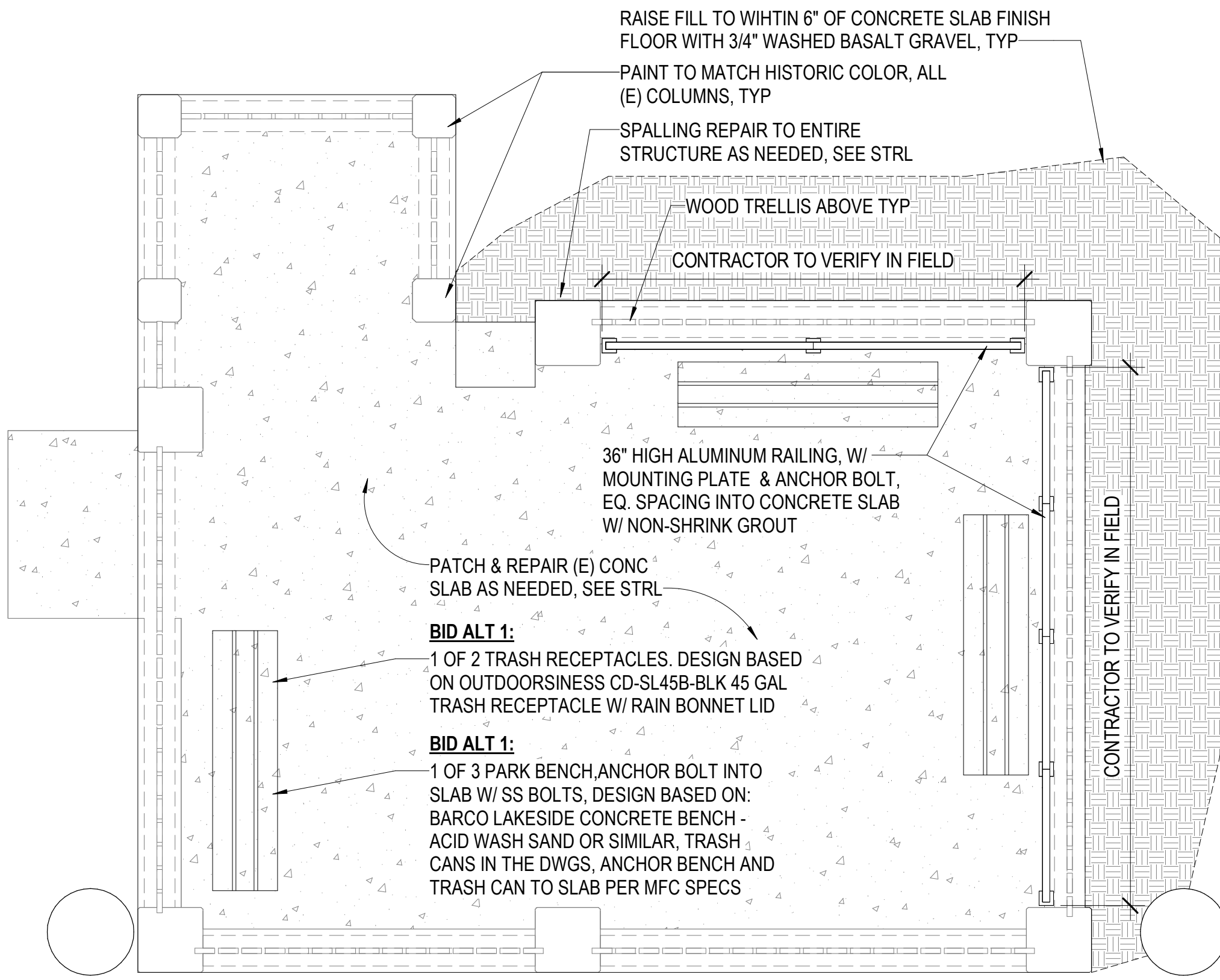
**2 ANTI-AIRCRAFT ROOF PLAN**  
SCALE: 3/8" = 1'-0"



REMOVE-SALVAGE WOOD PANELS-TRELLIS & REPLACE FASTENERS AND ANCHOR BOLTS WITH SS HARDWARE MATCHING THICKNESS AND TYPE.

**LEGEND:**  
EXPT-01 PRIME AND EGGSHELL PAINT

**3 ANTI-AIRCRAFT GUN EMPLACEMENT TOWER TYPICAL SITE ELEVATION**  
SCALE: 3/8" = 1'-0"



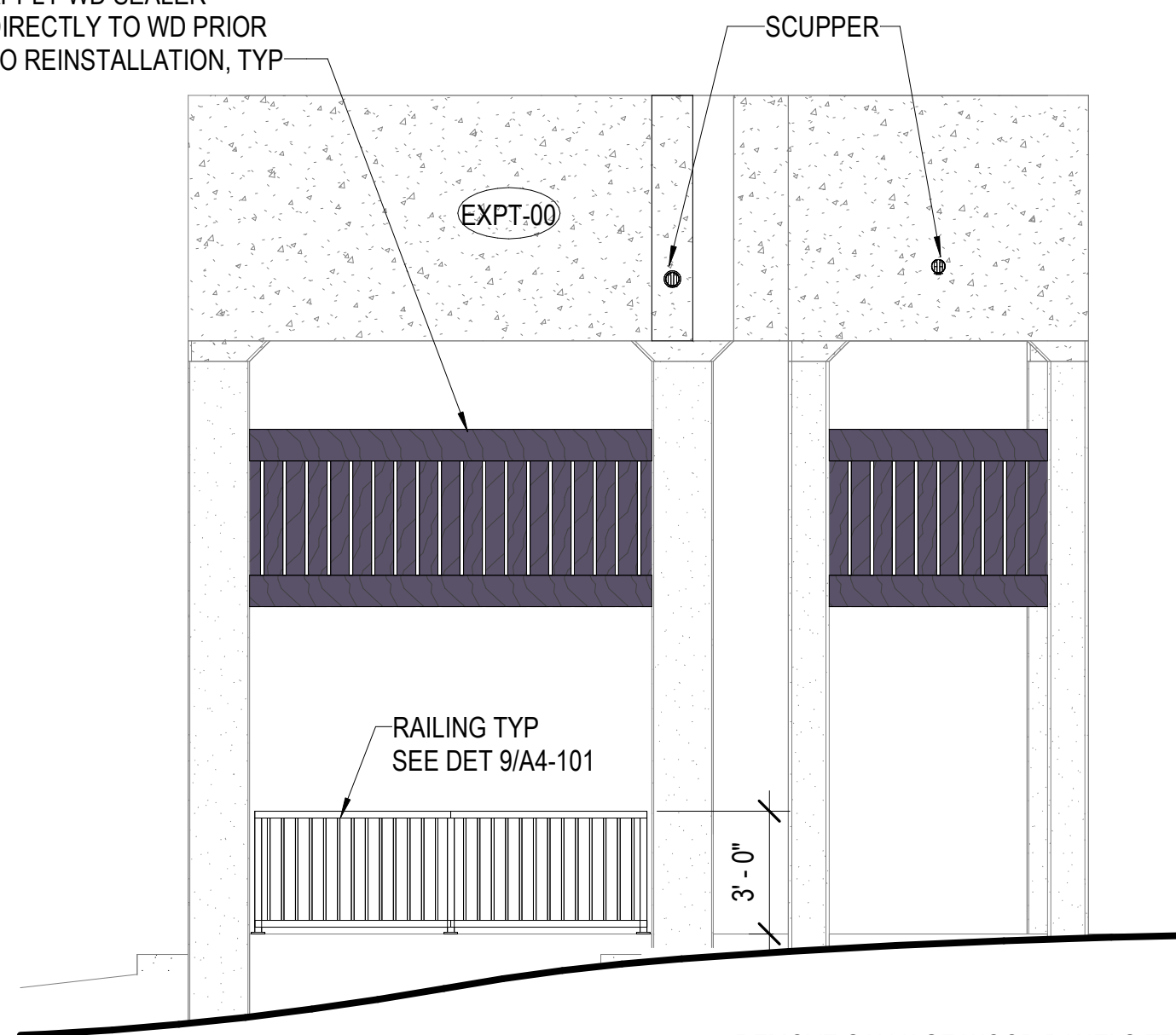
**1 ANTI-AIRCRAFT GUN EMPLACEMENT TOWER FLOOR PLAN BID ALT 1**  
SCALE: 3/8" = 1'-0"

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:

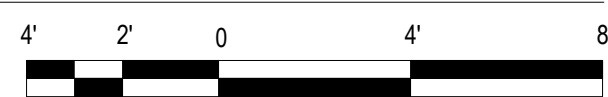
		STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION	
SAND ISLAND SRA PARK IMPROVEMENTS PH. VI TAX MAP KEY: 1-5-041:006 ANTI-AIRCRAFT GUN EMPLACEMENT TOWER PLANS AND ELEVATIONS		DESIGNED: JS DRAWN: G70 CHECKED: KC APPROVED:	
EXPIRES 4/30/2028 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION		SUBMITTED: BID SUBMITTAL DATE: 04/13/2026 SCALE: AS NOTED	
CHIEF ENGINEER Dina Lau E-signed 2026-04-17 08:22AM HST dina.u.lau@hawaii.gov State of Hawaii Civil Engineer		A2-101 10 OF 29 SHEETS.	

APPLY WD SEALER DIRECTLY TO WD PRIOR TO REINSTALLATION, TYP



**1 PLAN NORTH ELEVATION**

SCALE: 1/4" = 1'-0"

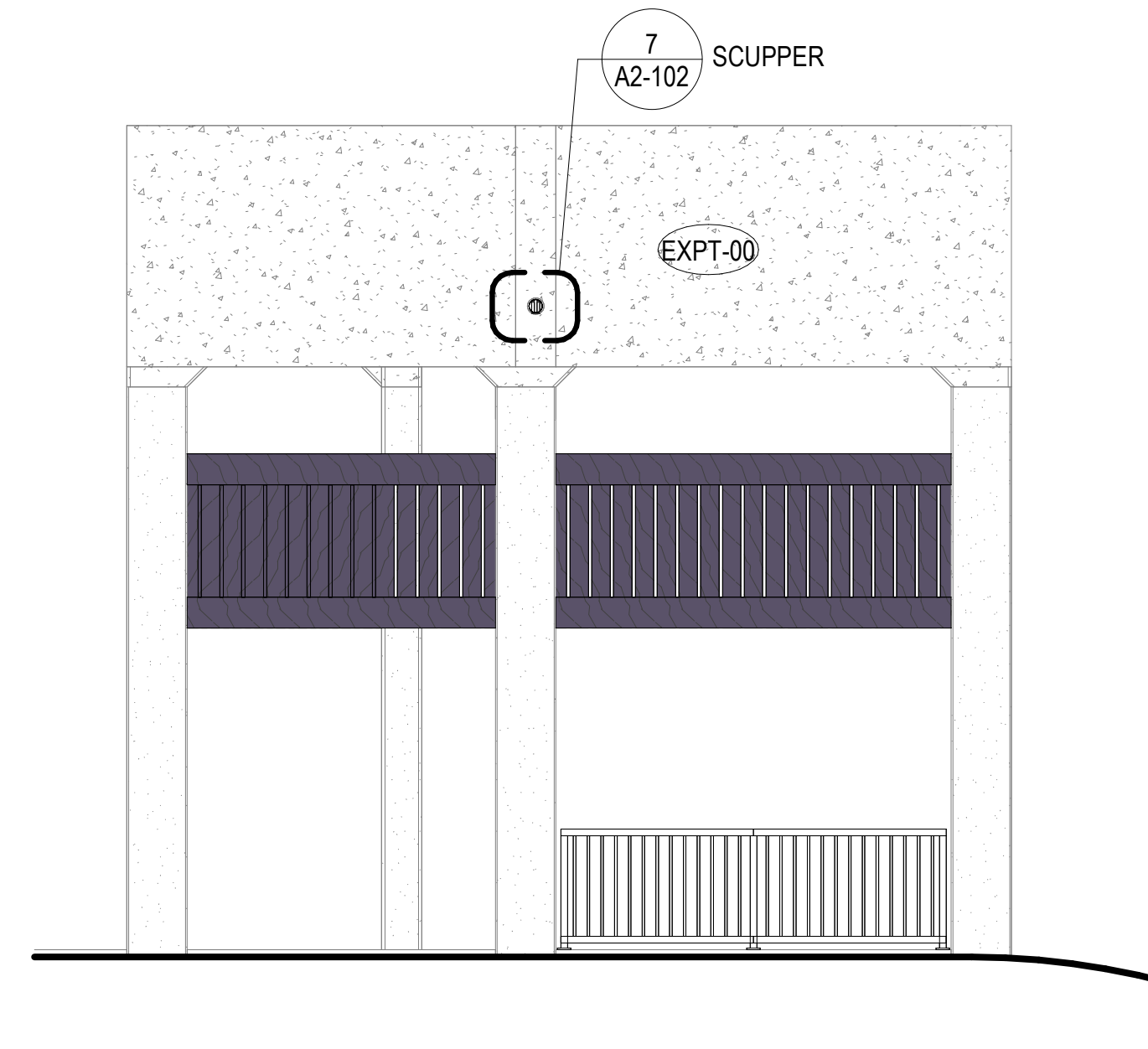
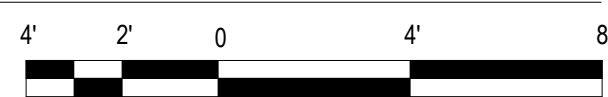


REMOVE SALVAGE WOOD PANELS-TRELLIS & REPLACE FASTENERS AND ANCHOR BOLTS WITH SS HARDWARE MATCHING THICKNESS AND TYPE.



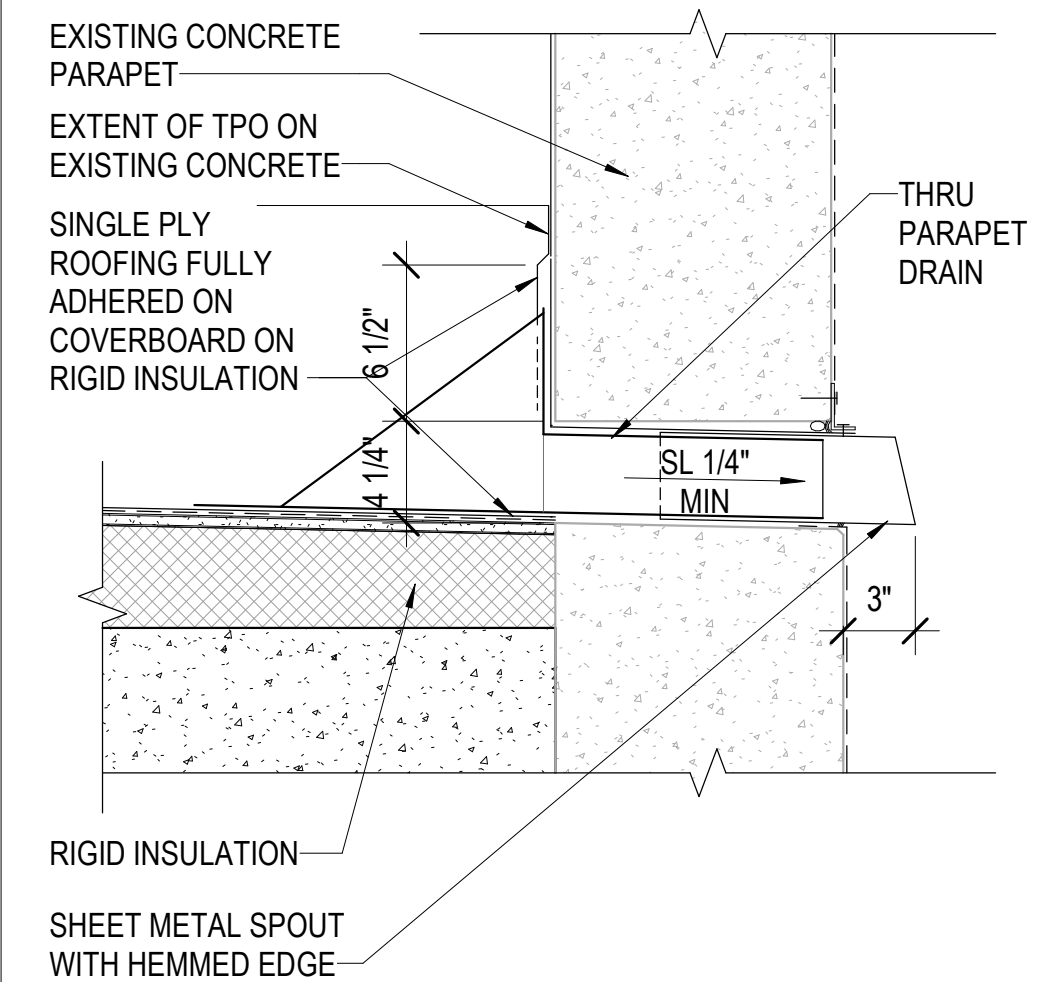
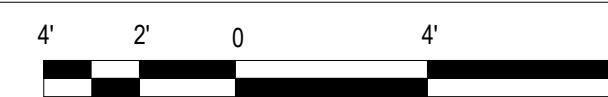
**2 PLAN EAST ELEVATION**

SCALE: 1/4" = 1'-0"



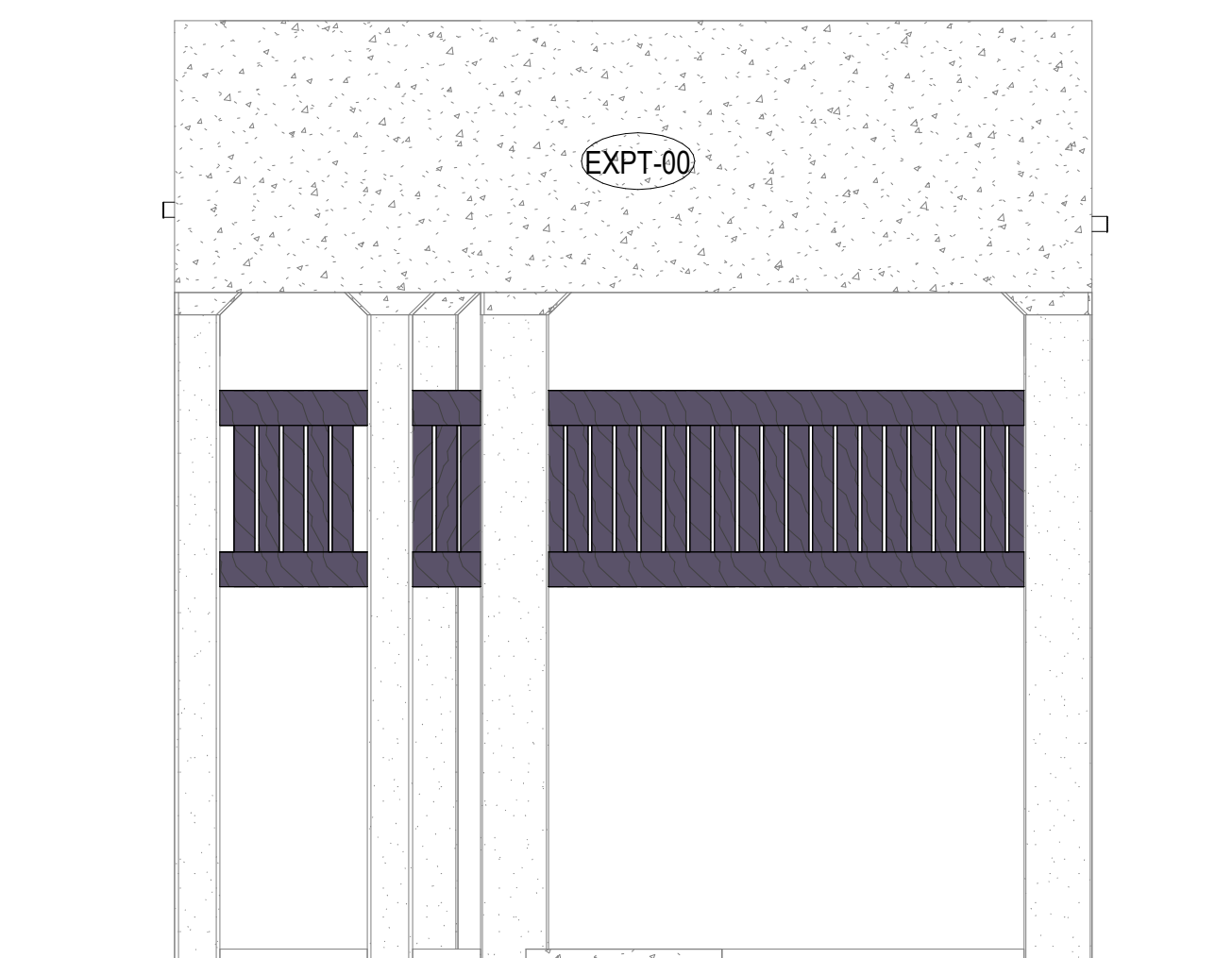
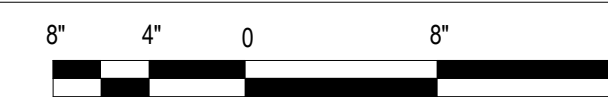
**3 PLAN SOUTH ELEVATION**

SCALE: 1/4" = 1'-0"



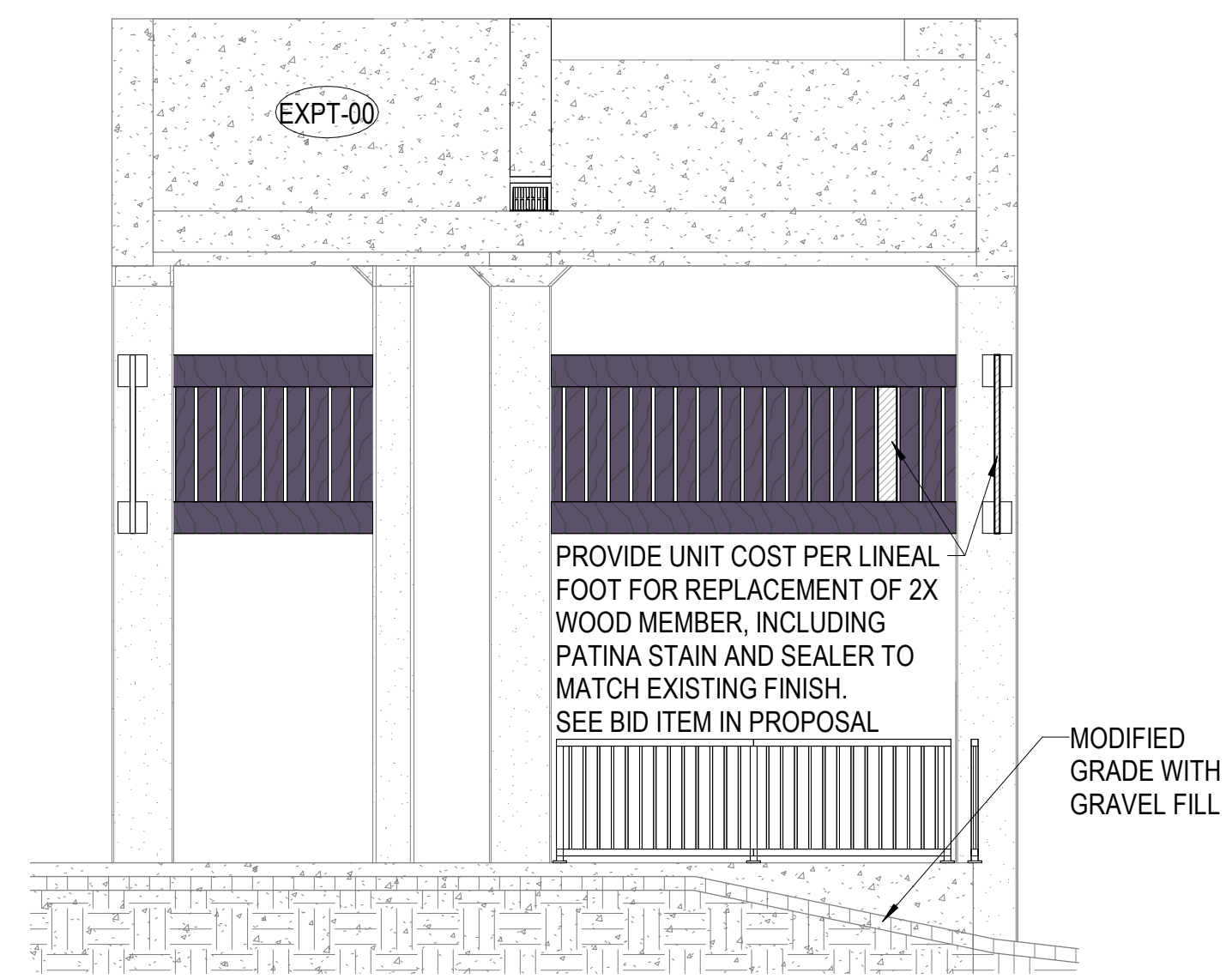
**7 OVERFLOW OUTLET**

SCALE: 1 1/2" = 1'-0"



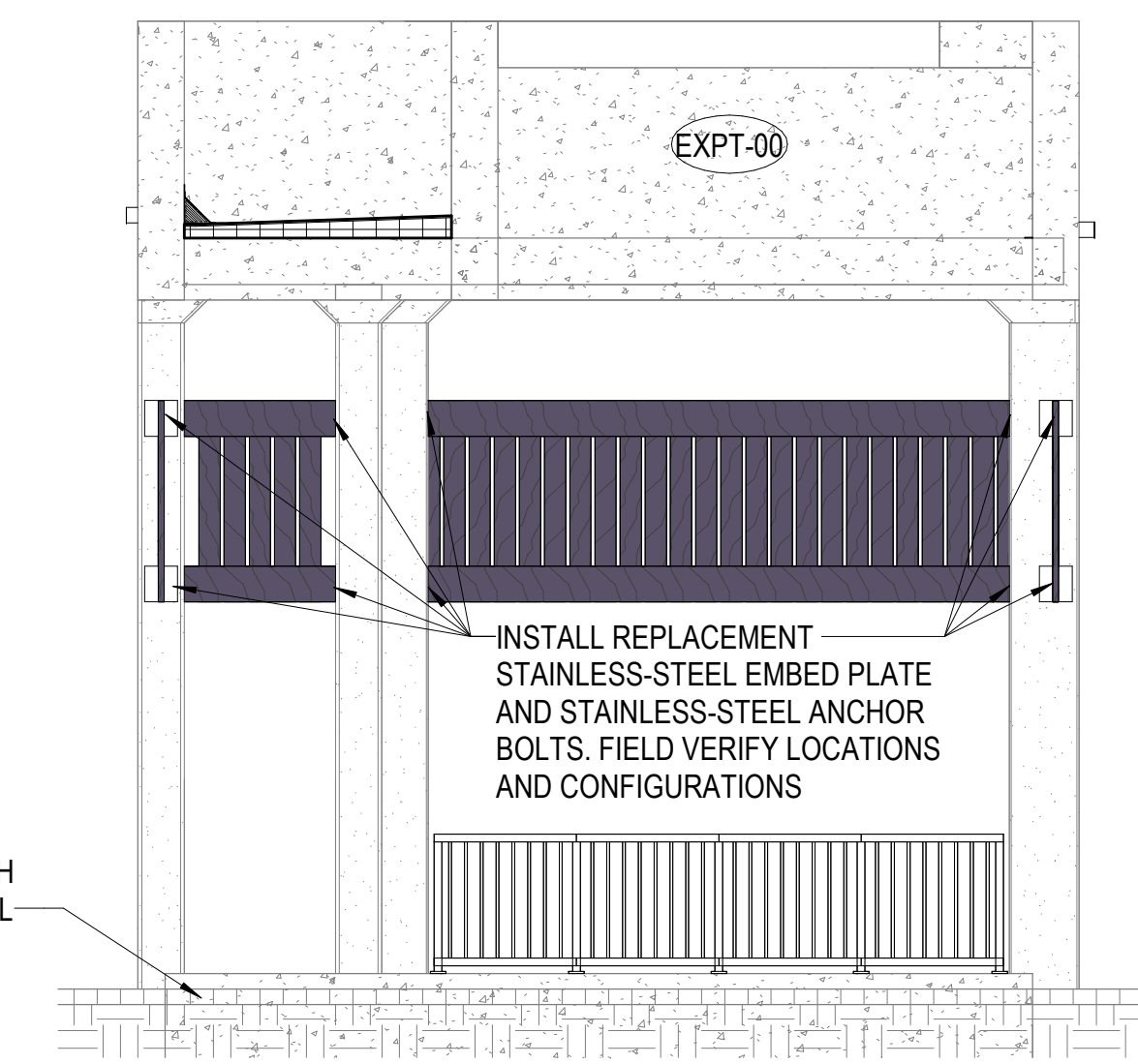
**4 PLAN WEST ELEVATION**

SCALE: 1/4" = 1'-0"



**5 ANTI-AIRCRAFT GUN EMPLACEMENT CROSS SECTION**

SCALE: 1/4" = 1'-0"



**6 ANTI-AIRCRAFT GUN EMPLACEMENT LONGITUDINAL SECTION**

SCALE: 1/4" = 1'-0"



REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED

EXPIRES 4/30/2028

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

**SAND ISLAND SRA PARK IMPROVEMENTS PH. VI**  
TAX MAP KEY: 1-5-041:006  
**ANTI-AIRCRAFT GUN EMPLACEMENT TOWER PLANS,  
ELEVATIONS AND SECTIONS**

DESIGNED: JS  
DRAWN: G70  
CHECKED: KC  
APPROVED:

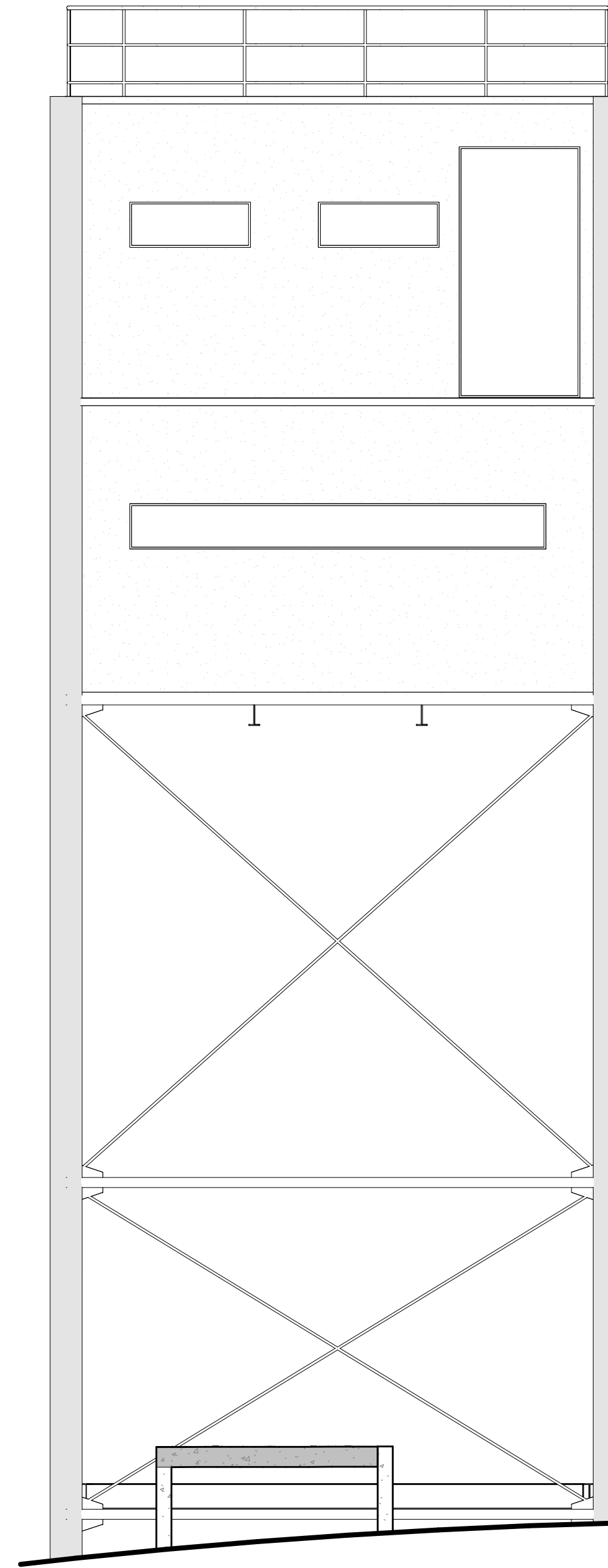
DATE: 04/13/2026  
SCALE: AS NOTED

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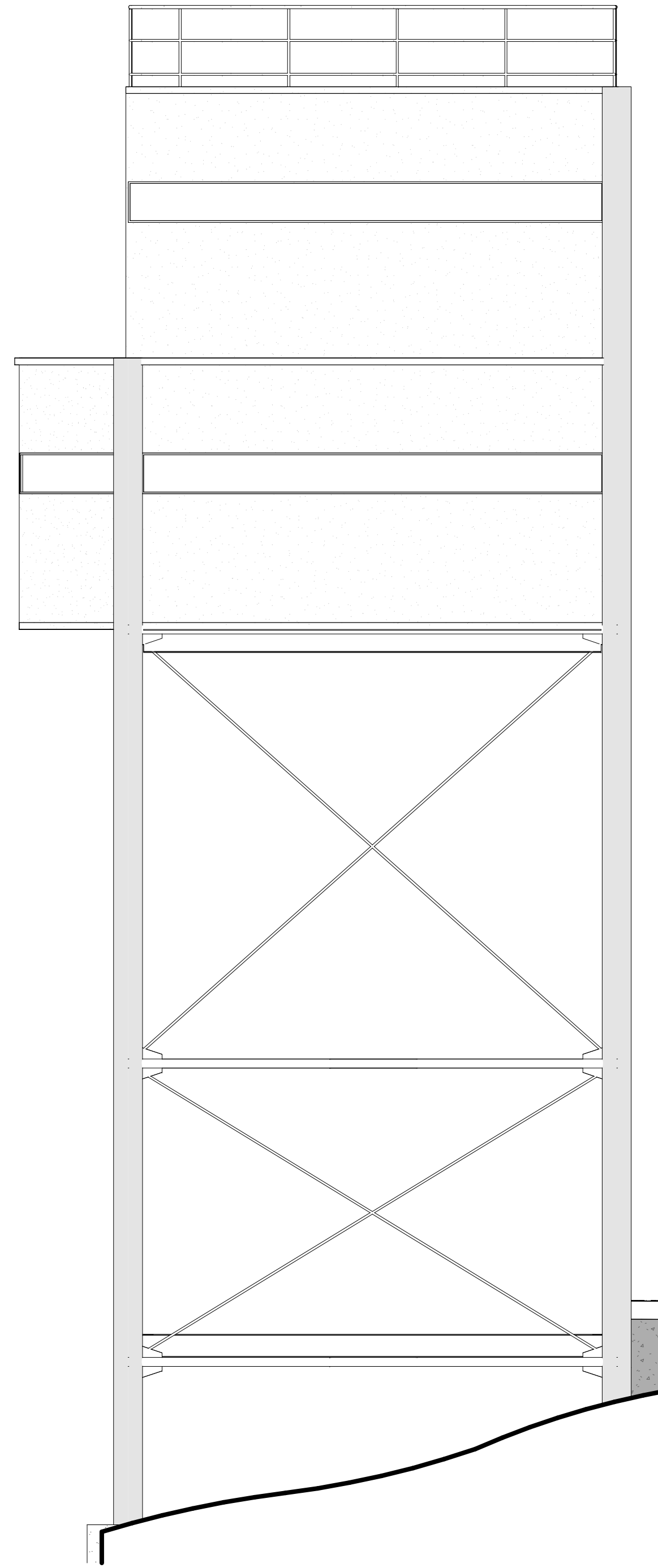
Dina Lau  
E-signed 2026-04-17 08:22AM HST  
dina.u.lau@hawaii.gov  
State of Hawaii  
Civil Engineer

**A2-102**

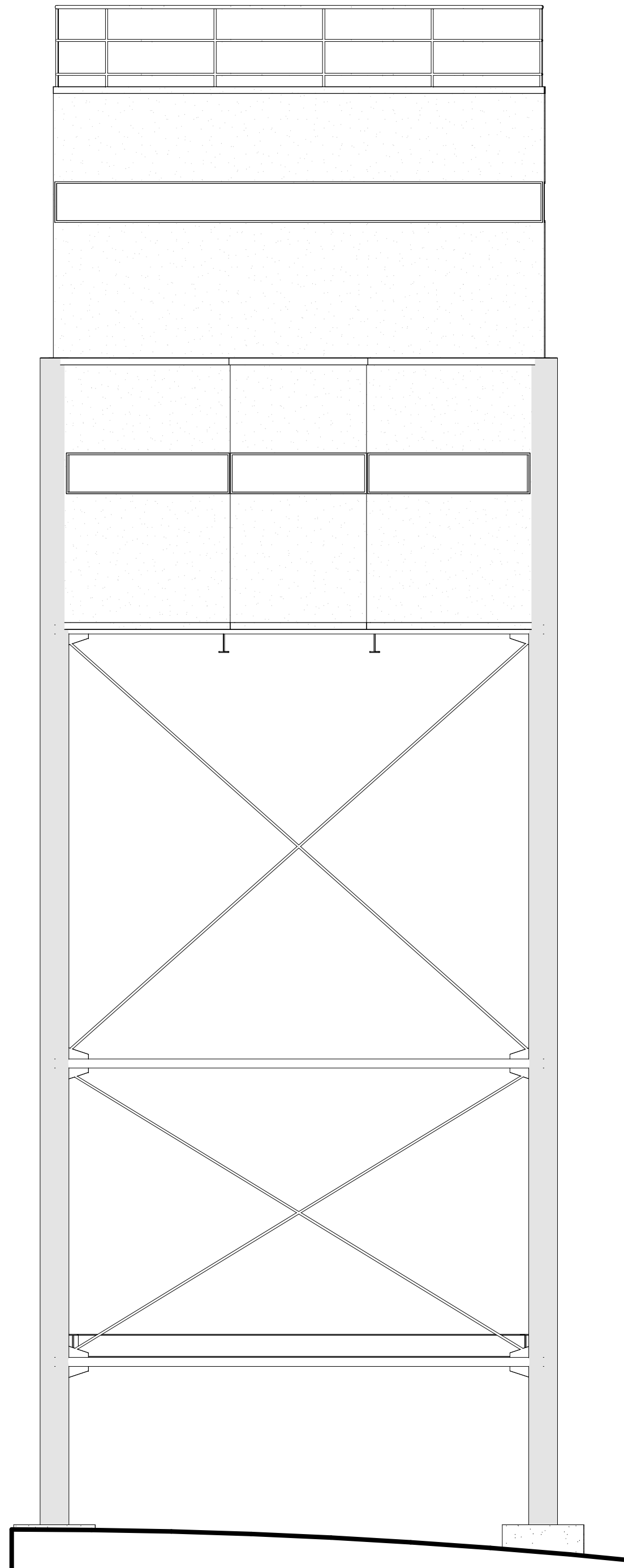
REFER TO STRUCTURAL DRAWINGS FOR BID ALTERNATES 2 AND 3,  
PRIORITY AND NON-PRIORITY STRUCTURAL WORK



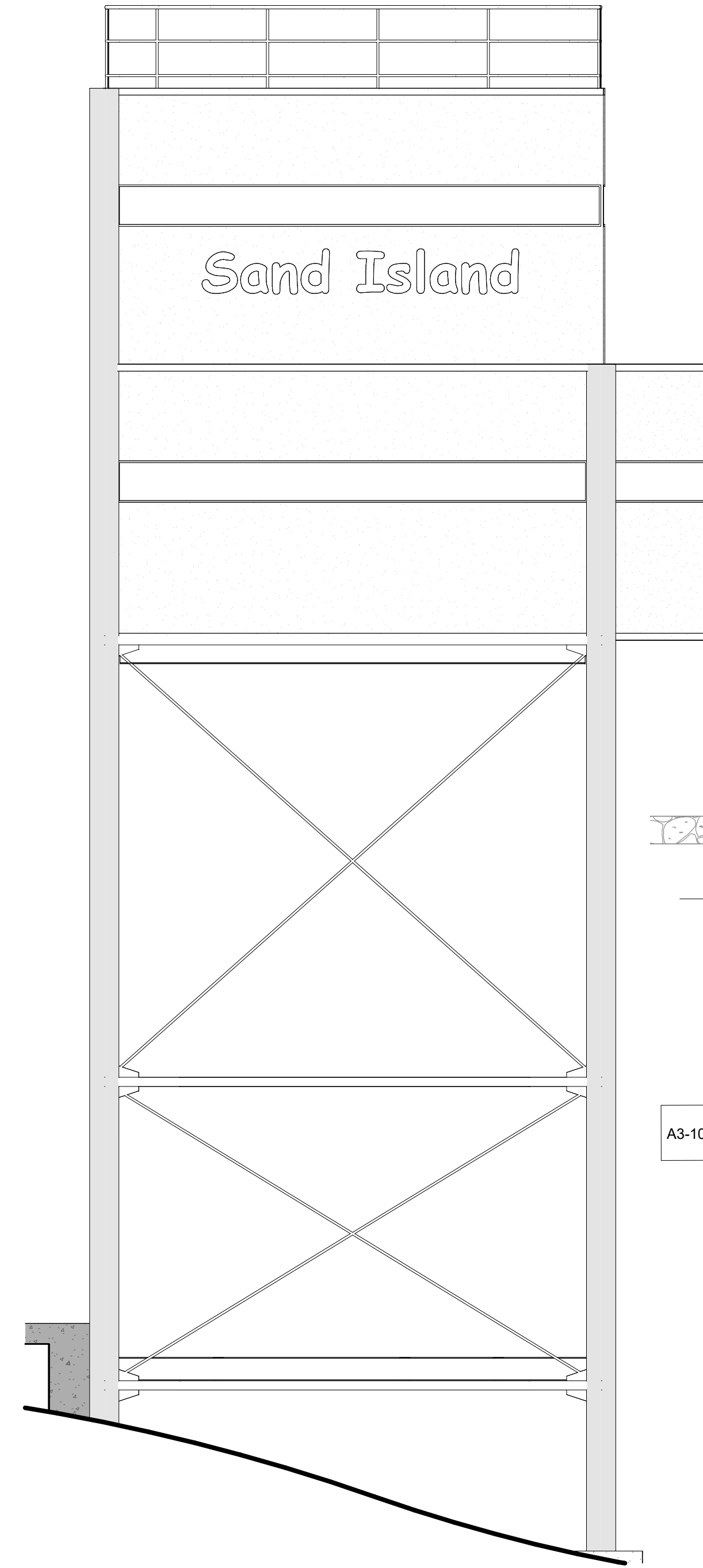
**5** CONTROL POST TOWER EAST  
SCALE: 1/4" = 1'-0"



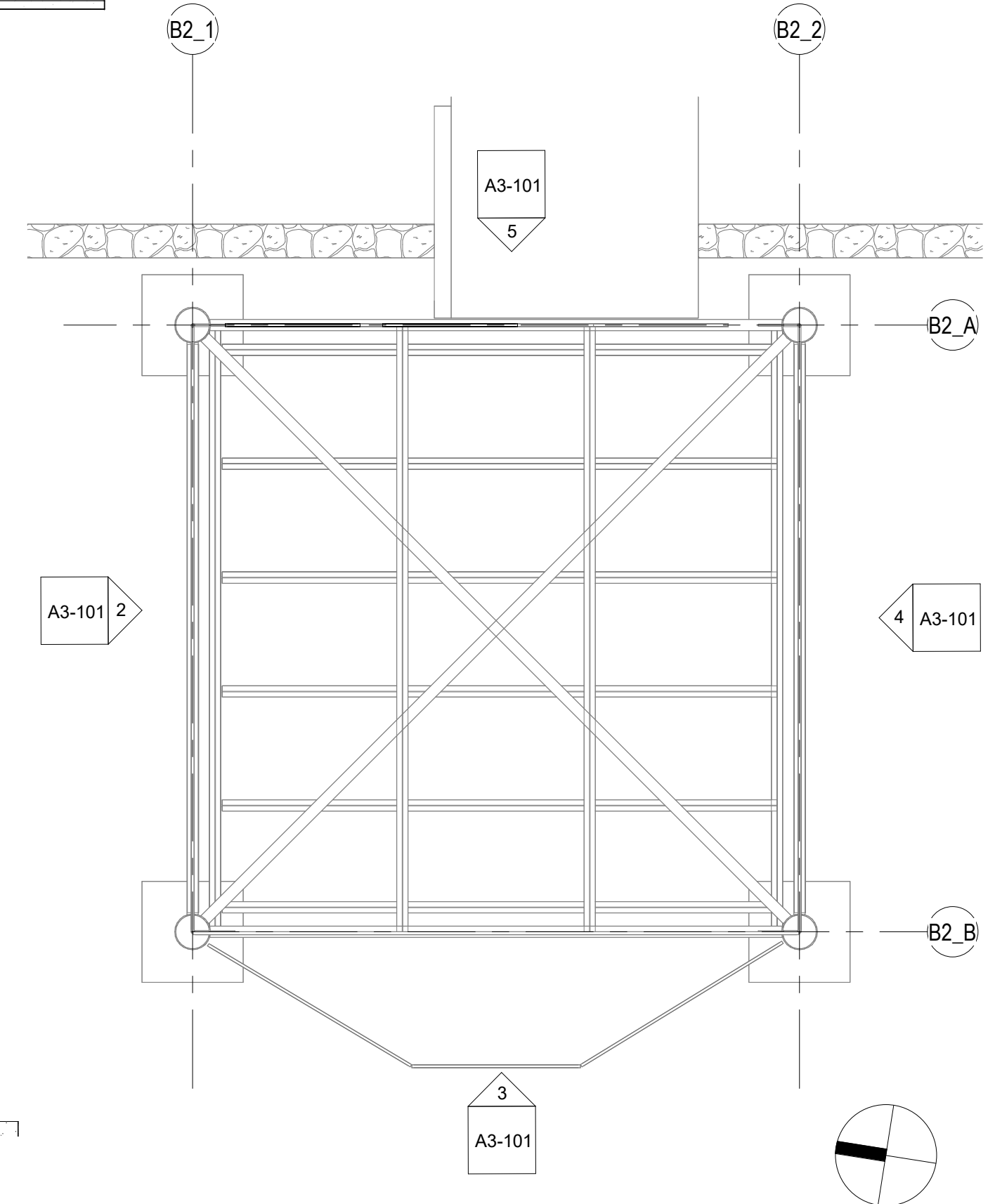
**4** CONTROL POST TOWER SOUTH  
SCALE: 1/4" = 1'-0"



**3** CONTROL POST TOWER WEST  
SCALE: 1/4" = 1'-0"

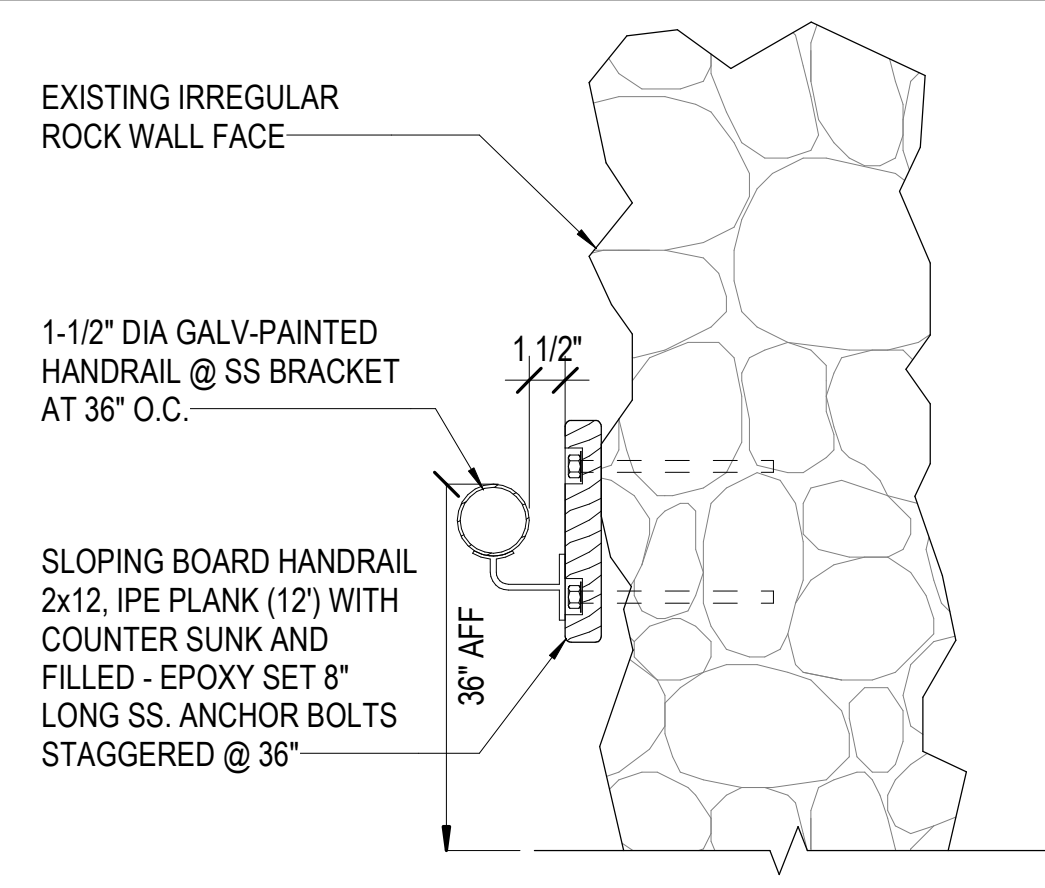


**2** CONTROL POST TOWER NORTH  
SCALE: 1/4" = 1'-0"

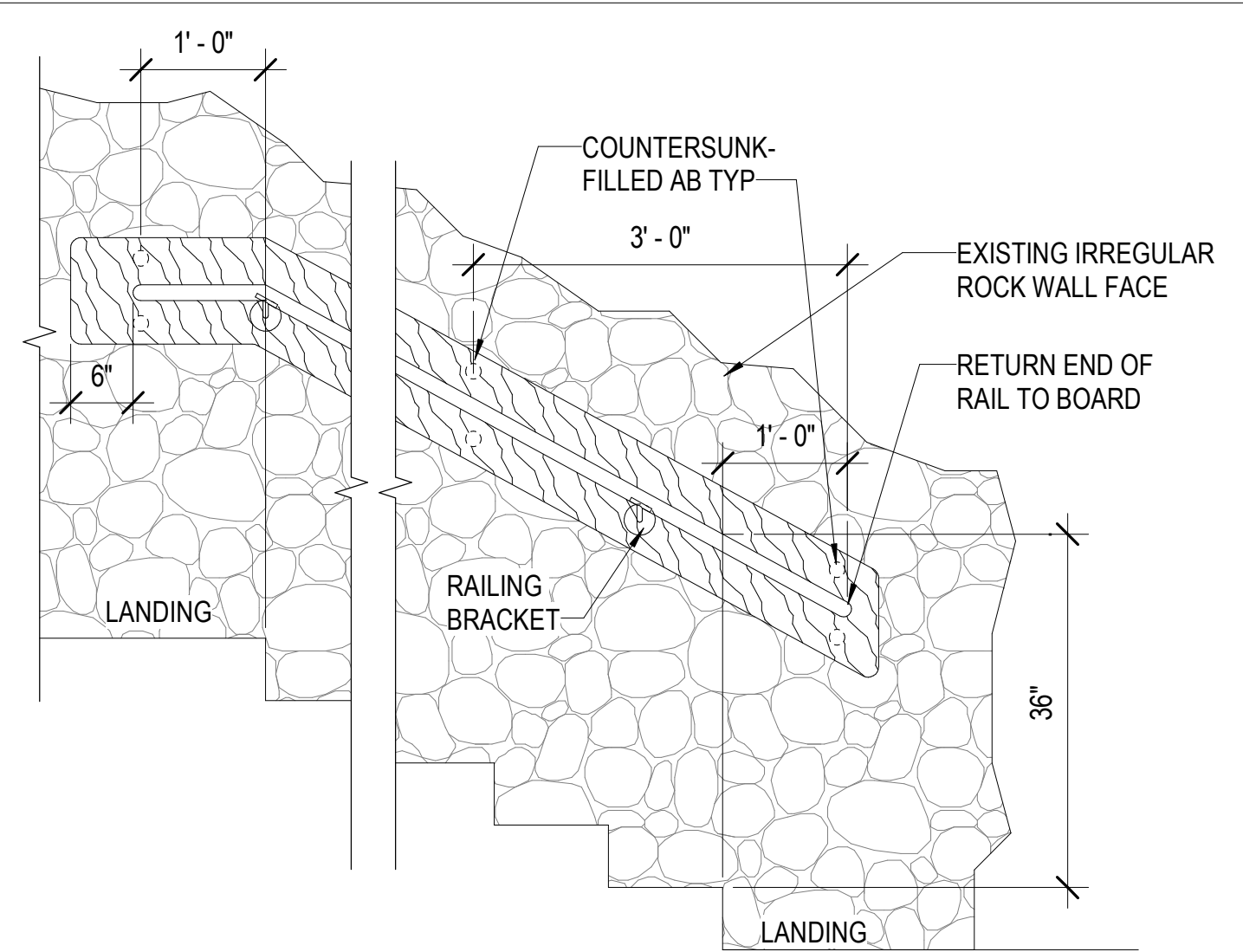


**1** CONTROL POST TOWER FLOOR PLAN  
SCALE: 1/4" = 1'-0"

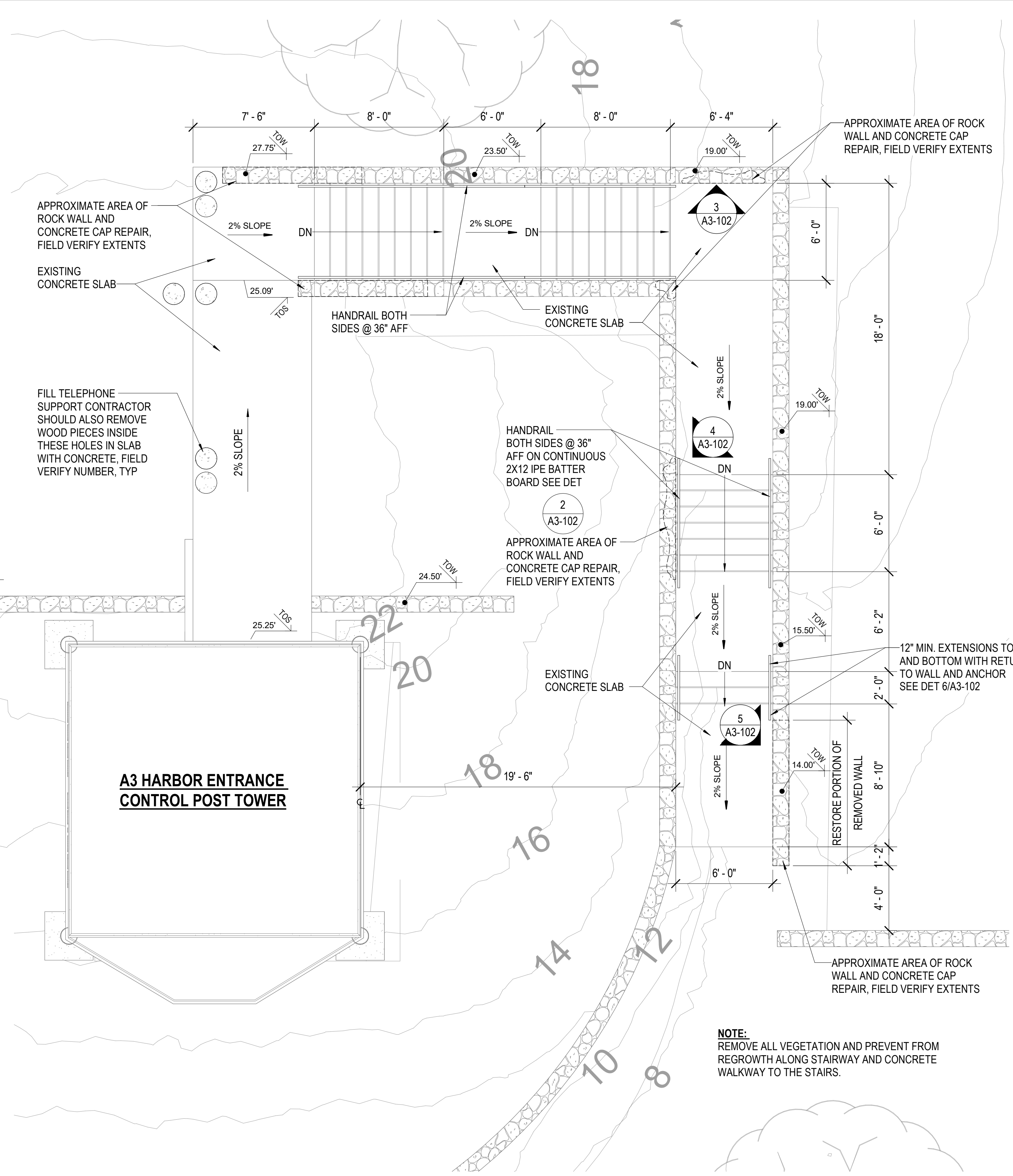
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:
<p>STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION</p> <p><b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006 <b>HARBOR ENTRANCE CONTROL POST TOWER POST PLAN AND ELEVATIONS</b></p>					
DESIGNED:	JS	SUBMITTED: BID SUBMITTAL	DL		
DRAWN:	G70	DATE:	04/13/2026		
CHECKED:	KC	SCALE:	AS NOTED		
APPROVED:	-				
<p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION</p>		<p>Dina Lau E-signed 2026-04-17 08:22AM HST dina.u.lau@hawaii.gov State of Hawaii Civil Engineer</p>		<p><b>A3-101</b></p>	



**2 TYP HANDRAIL DETAIL**  
SCALE: 1 1/2" = 1'-0"



**6 TYP. HANDRAIL ELEVATION DETAIL**  
SCALE: 3/4" = 1'-0"



**1 HARBOR ENTRANCE STAIR PLAN - BID ALT 3**  
SCALE: 1/4" = 1'-0"

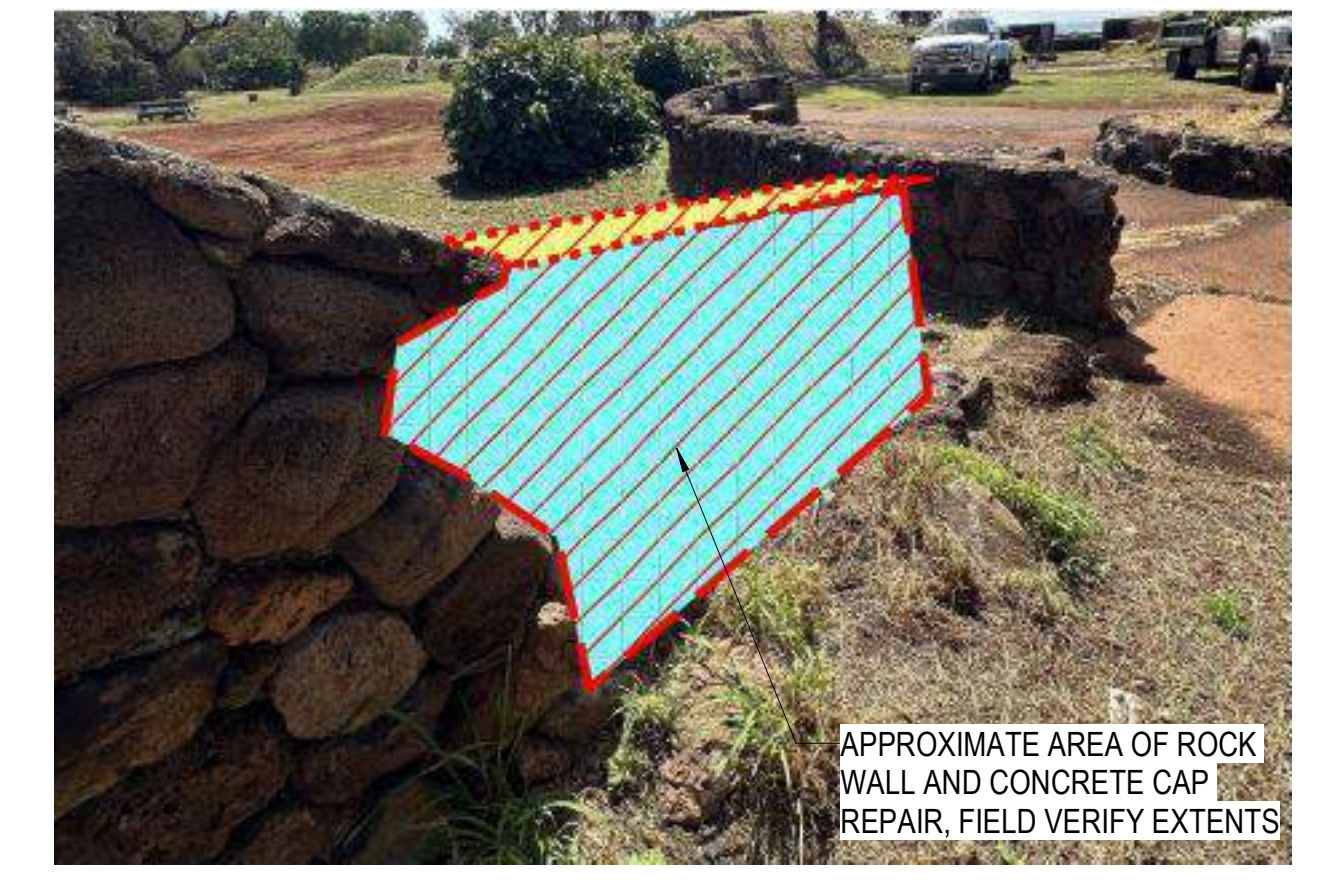
ALL STAINLESS STEEL SHALL BE 316 STAINLESS STEEL.



**3 ROCK WALL REPAIR**  
SCALE: NTS



**4 ROCK WALL REPAIR**  
SCALE: NTS



**5 ROCK WALL REPAIR**  
SCALE: NTS

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:

EXPIRES 4/30/2028

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

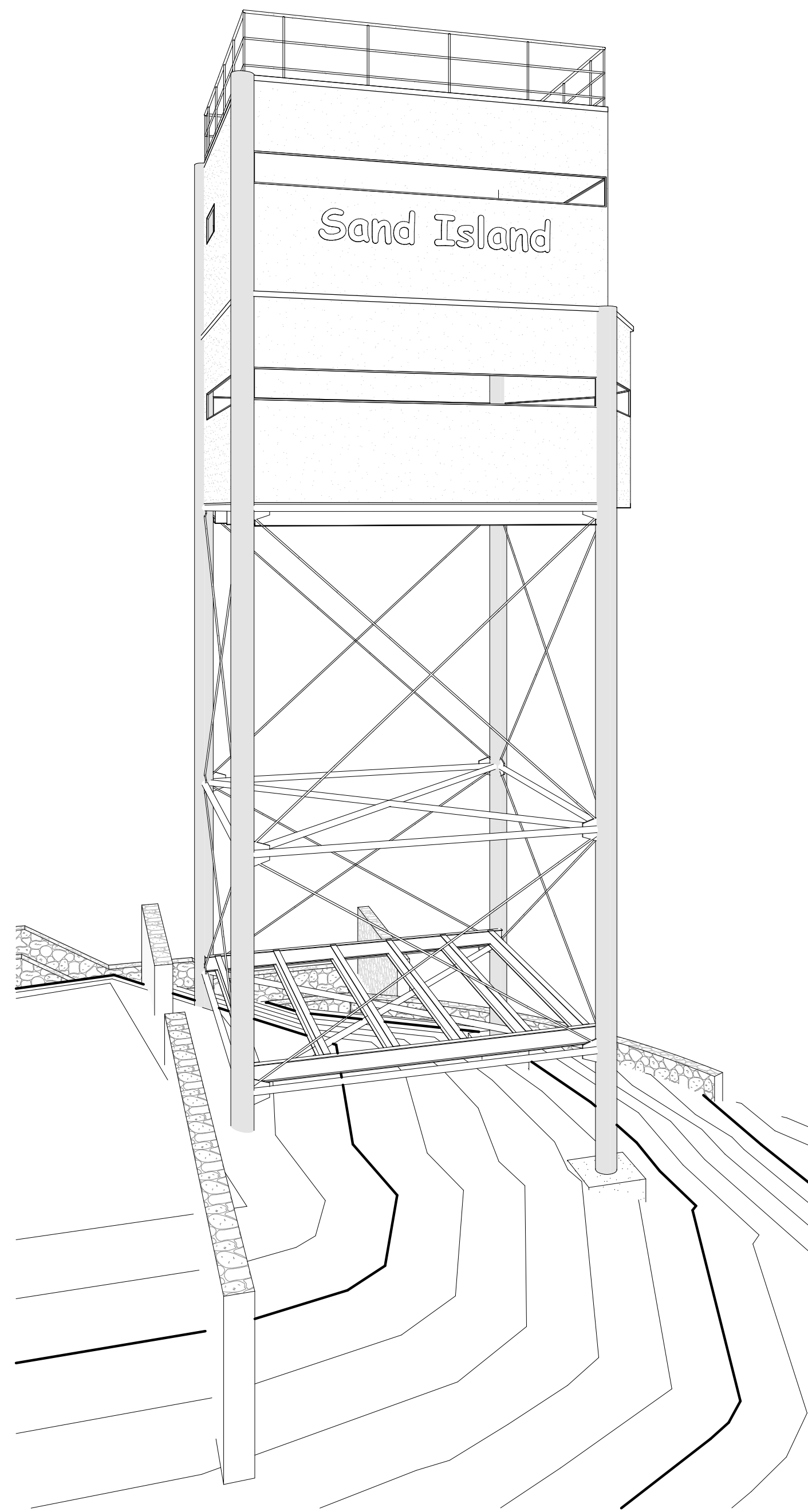
**SAND ISLAND SRA PARK IMPROVEMENTS PH. VI**  
TAX MAP KEY: 1-5-041:006  
**HARBOR ENTRANCE CONTROL POST TOWER STAIR - BID ALT 3**

DESIGNED: JS  
DRAWN: G70  
CHECKED: KC  
APPROVED: -

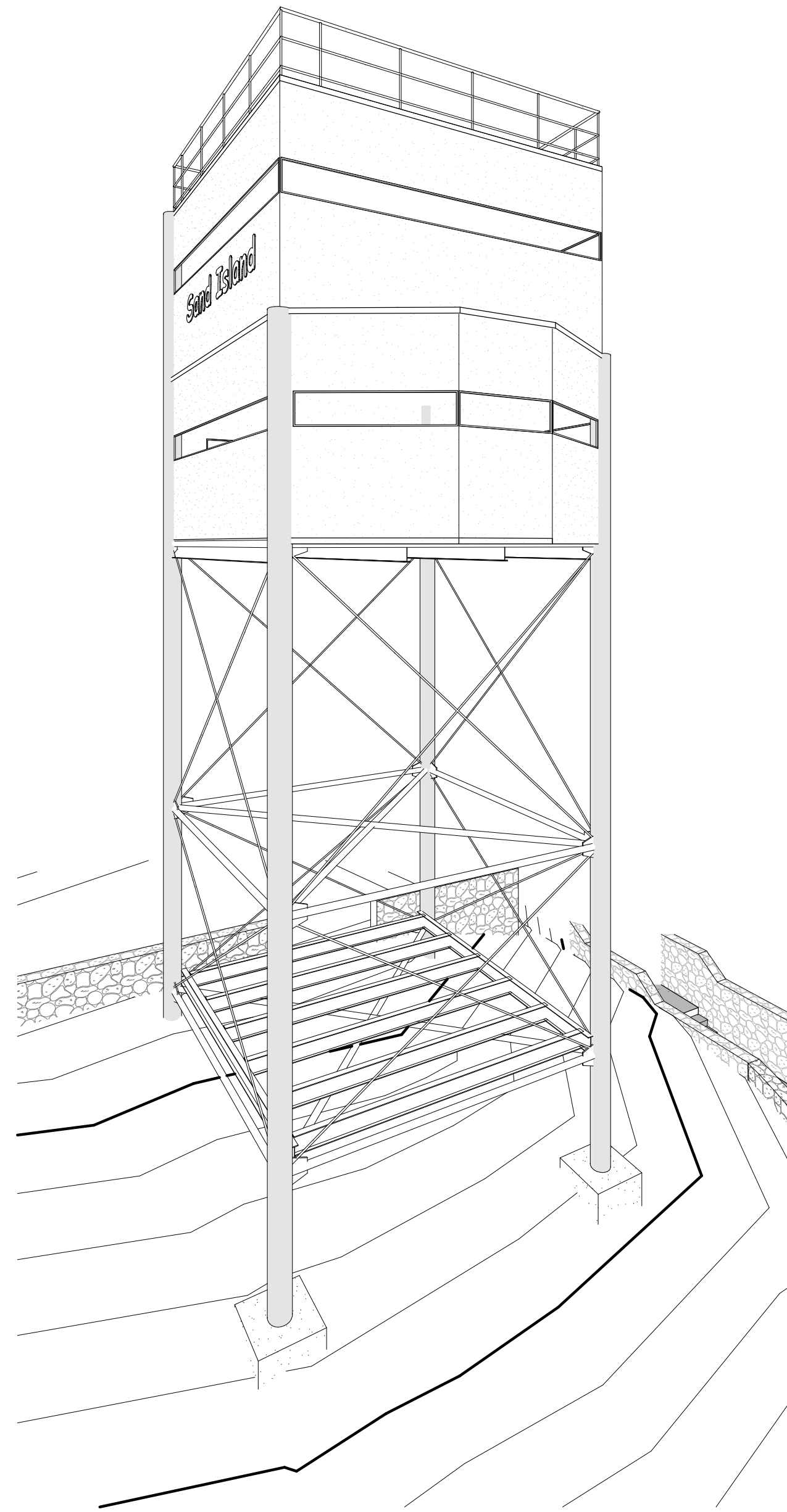
SUBMITTED: BID SUBMITTAL  
DATE: 04/13/2026  
SCALE: AS NOTED

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E-signed 2026-04-17 08:22AM HST  
dina.lau@hawaii.gov  
State of Hawaii  
Civil Engineer

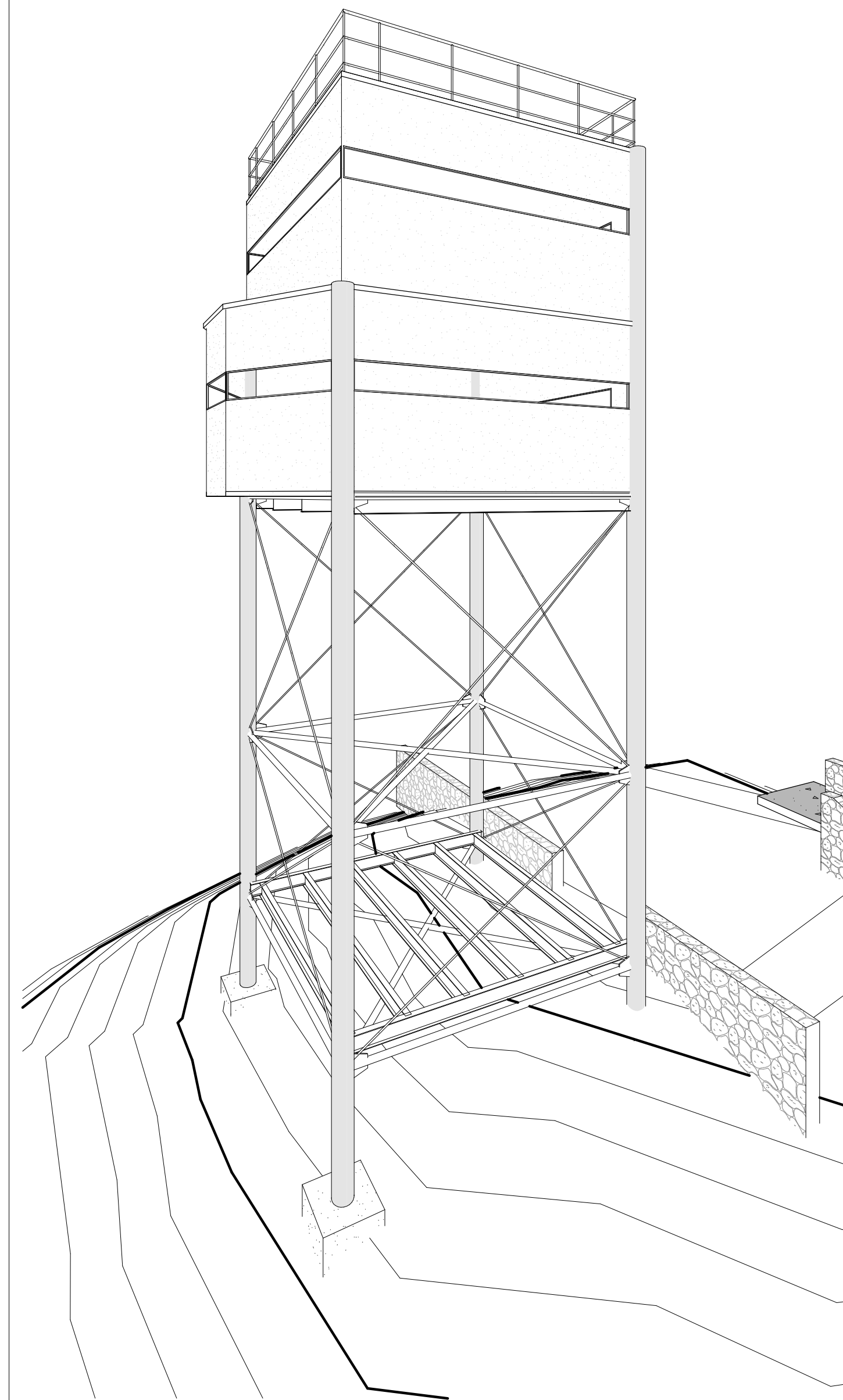
**A3-102**



**1** ANTI-AIRCRAFT PERSPECTIVE  
SCALE: NTS



**2** ANTI-AIRCRAFT PERSPECTIVE  
SCALE: NTS



**3** ANTI-AIRCRAFT PERSPECTIVE  
SCALE: NTS



**4** ANTI-AIRCRAFT PERSPECTIVE  
SCALE: NTS

NOT TO SCALE. PERSPECTIVE DRAWINGS ARE REPRESENTATIVE OF THE INTENDED HISTORICALLY RESTORED STRUCTURE. DO NOT SCALE FROM THIS DRAWING. REFER TO PLAN, ELEVATION, AND DETAIL DRAWINGS FOR DIMENSIONS AND CONSTRUCTION REQUIREMENTS. MATERIALS, FINISHES, AND SPECIFIC EXTERIOR TREATMENTS SHALL BE AS NOTED IN THE DRAWINGS AND SPECIFICATIONS.

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
<p>STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION</p> <p><b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006 <b>ANTI-AIRCRAFT GUN EMPLACEMENT TOWER PERSPECTIVE VIEWS</b></p>					
DESIGNED: JS		SUBMITTED: BID SUBMITTAL <i>DL</i>			
DRAWN: G70		DATE: 04/13/2026			
CHECKED: KC		SCALE: AS NOTED			
APPROVED: -		<p>Dina Lau E-signed 2026-04-17 08:22AM HST dina.lau@hawaii.gov State of Hawaii Civil Engineer</p>			

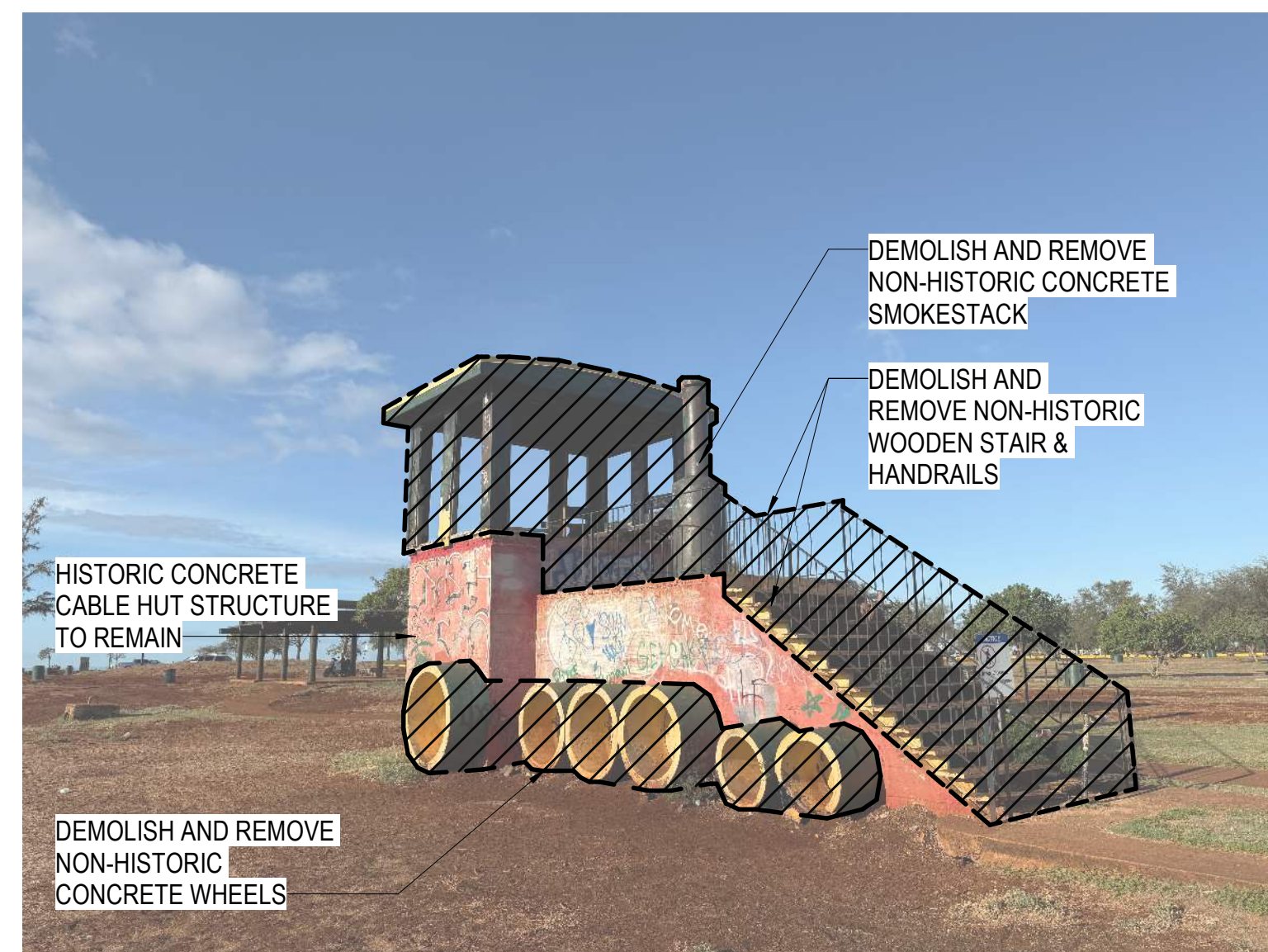
EXPIRES 4/30/2028

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**A3-103**

**GENERAL NOTES**

**NOTE:**  
THE CONTRACTOR SHALL CLEARLY MARK ALL NON-HISTORIC ELEMENTS IDENTIFIED FOR REMOVAL AND REVIEW THE PROPOSED DEMOLITION LIMITS WITH THE ENGINEER PRIOR TO COMMENCING ANY DEMOLITION WORK.



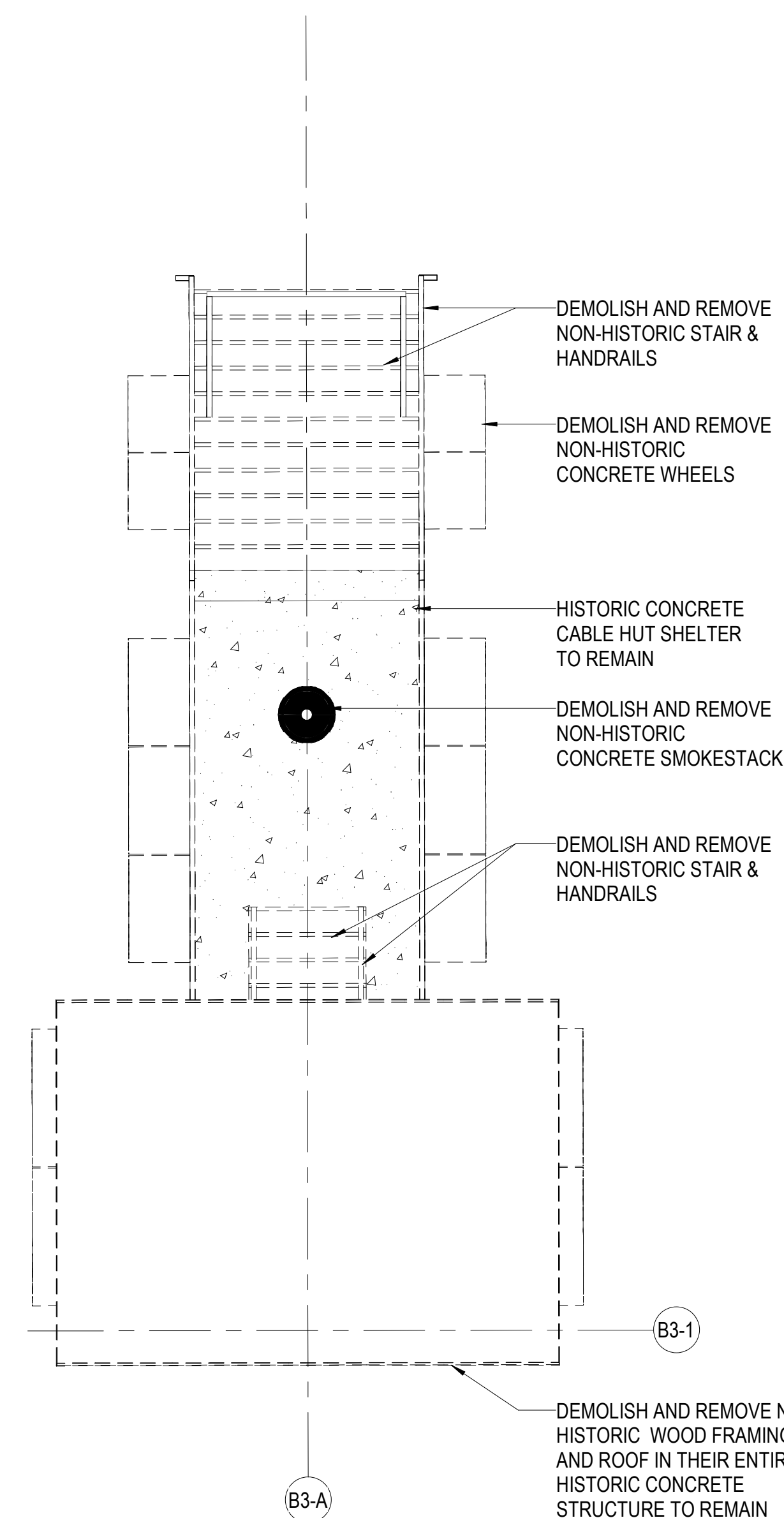
**2** CABLE HUT (TRAIN)\_EAST ELEVATION (PHOTO)  
SCALE: 3" = 1'-0"



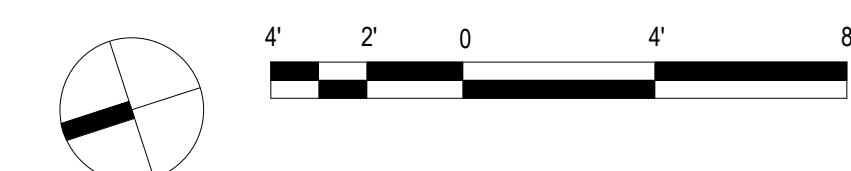
**3** CABLE HUT (TRAIN)\_SOUTH ELEVATION (PHOTO)  
SCALE: 3" = 1'-0"



**4** CABLE HUT (TRAIN)\_NORTH ELEVATION (PHOTO)  
SCALE: 3" = 1'-0"



**1** EXISTING / DEMOLITION FLOOR PLAN  
SCALE: 1/4" = 1'-0"



**DEMOLITION / HISTORIC PRESERVATION NOTE:**  
SELECTIVE DEMOLITION SHALL BE UNDERTAKEN IN A MANNER THAT PRESERVES AND PROTECTS THE EXISTING HISTORIC CONCRETE STRUCTURE AND ITS CHARACTER-DEFINING FORM AND DETAILING. REMOVE ONLY NON-HISTORIC ELEMENTS AND LATER ALTERATIONS INDICATED FOR REMOVAL. METHODS SHALL BE NON-DESTRUCTIVE TO THE MAXIMUM EXTENT PRACTICABLE AND SHALL NOT IMPAIR THE ORIGINAL CONCRETE MASSING, GEOMETRY, EDGES, REVEALS, OR SURFACE EXPRESSION. ALL EXPOSED EDGES RESULTING FROM SELECTIVE DEMOLITION SHALL BE NEATLY CUT, FINISHED, AND FREE OF JAGGED OR SHARP EDGES. CONTRACTOR SHALL ENSURE THAT NO HAZARDOUS CONDITIONS ARE CREATED DURING OR AFTER DEMOLITION, AND ALL SURFACES SHALL BE LEFT IN A SAFE, STABLE, AND WORKMANLIKE CONDITION. UPON COMPLETION OF REMOVALS, PREPARE THE EXPOSED HISTORIC CONCRETE TO RECEIVE SPECIFIED CEMENT WASH AND PAINT FINISH TO RESTORE THE VISUAL INTEGRITY AND HISTORIC READING OF THE ORIGINAL CONCRETE CONSTRUCTION. PATCH, REPAIR, OR REPLACEMENT OF DAMAGED HISTORIC CONCRETE CAUSED BY DEMOLITION OPERATIONS WILL NOT BE PERMITTED WITHOUT ARCHITECT REVIEW AND APPROVAL. SEE ADDITIONAL REQUIREMENT IN PROJECT SPECIFICATION.

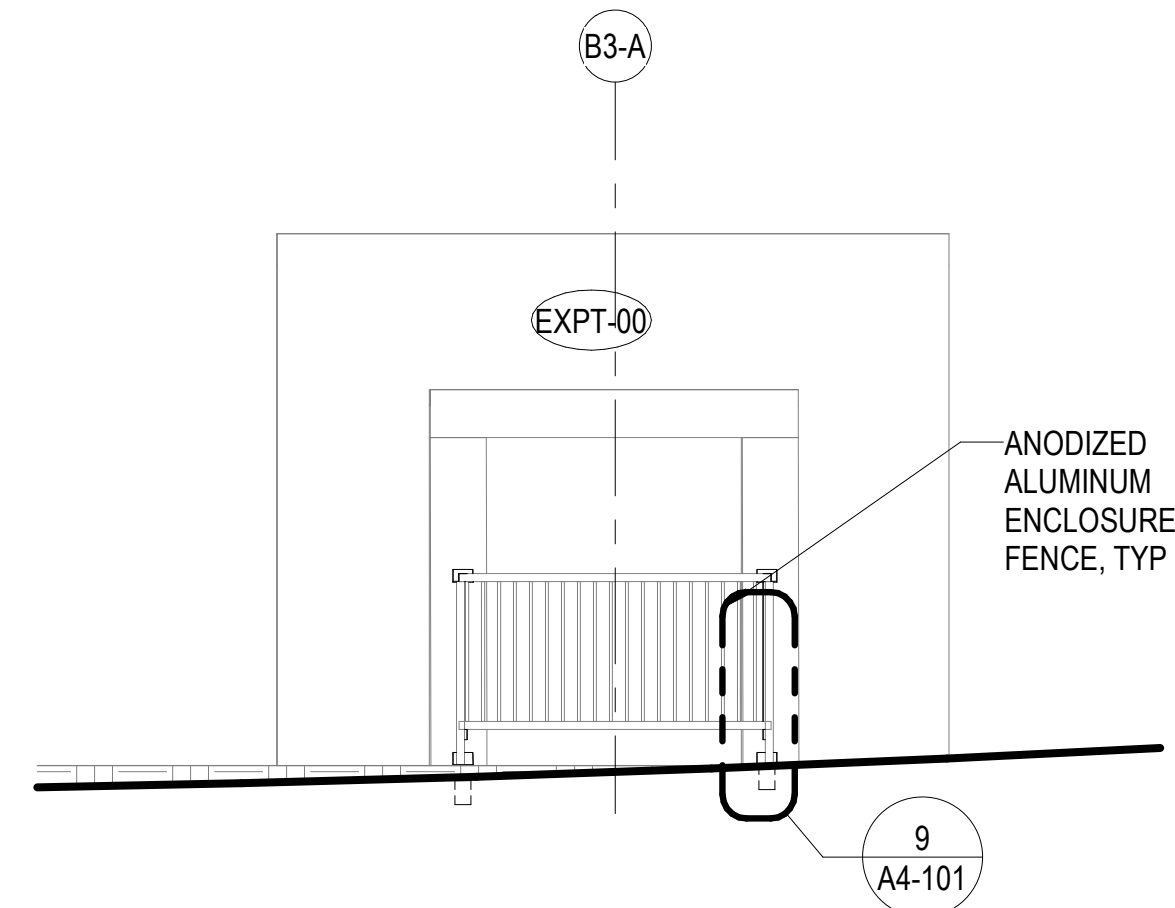
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED

		STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION <b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006 <b>CABLE HUT (TRAIN) DEMOLITION SCOPE</b>	
DESIGNED: JS		SUBMITTED: BID SUBMITTAL	DL
DRAWN: G70		DATE: 04/13/2026	
CHECKED: KC		SCALE: AS NOTED	
APPROVED: -			

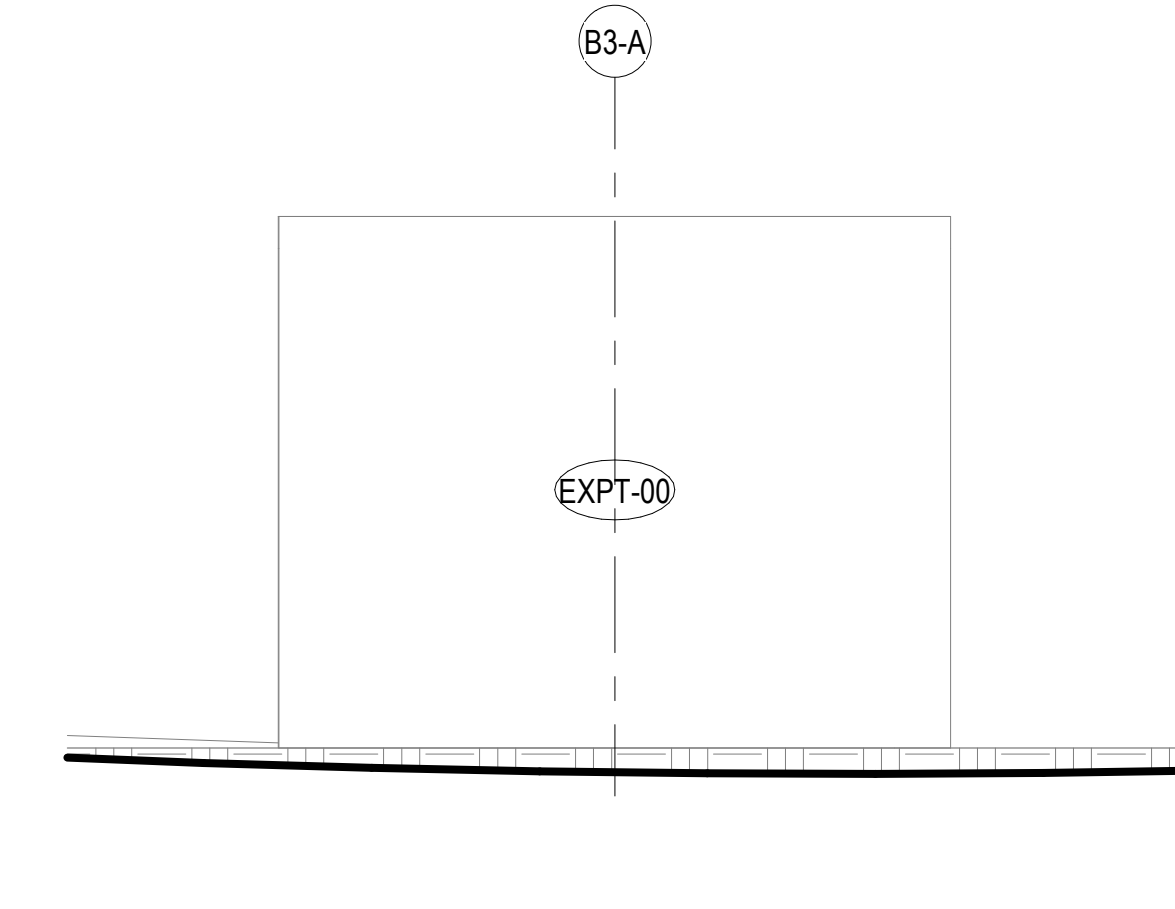
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION Dina Lau E-signed 2026-04-17 08:22AM HST dina.u.lau@hawaii.gov State of Hawaii Civil Engineer	
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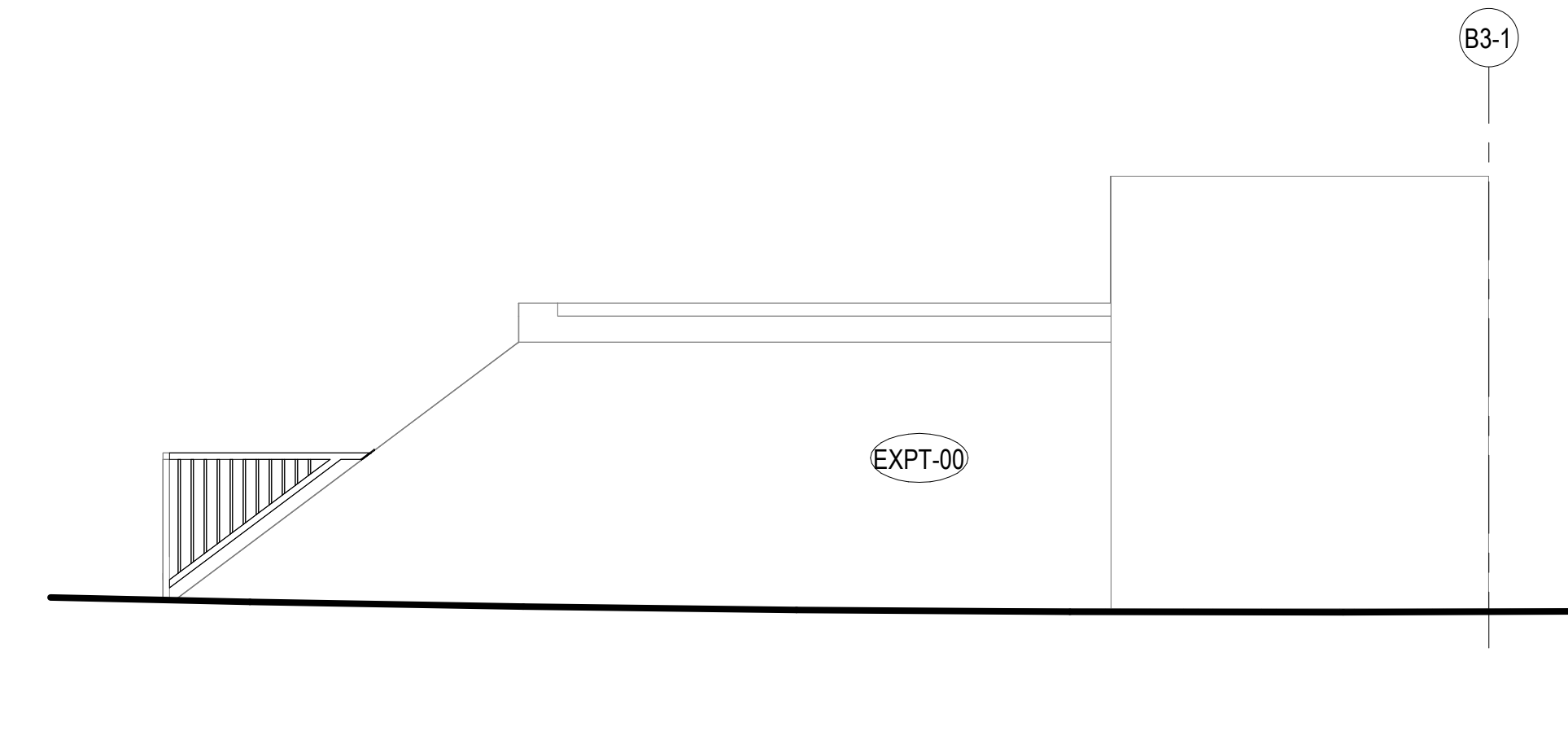
**3 CABLE HUT NORTH SITE ELEVATION**  
SCALE: 1/4" = 1'-0"  
4' 2' 0' 4' 8'



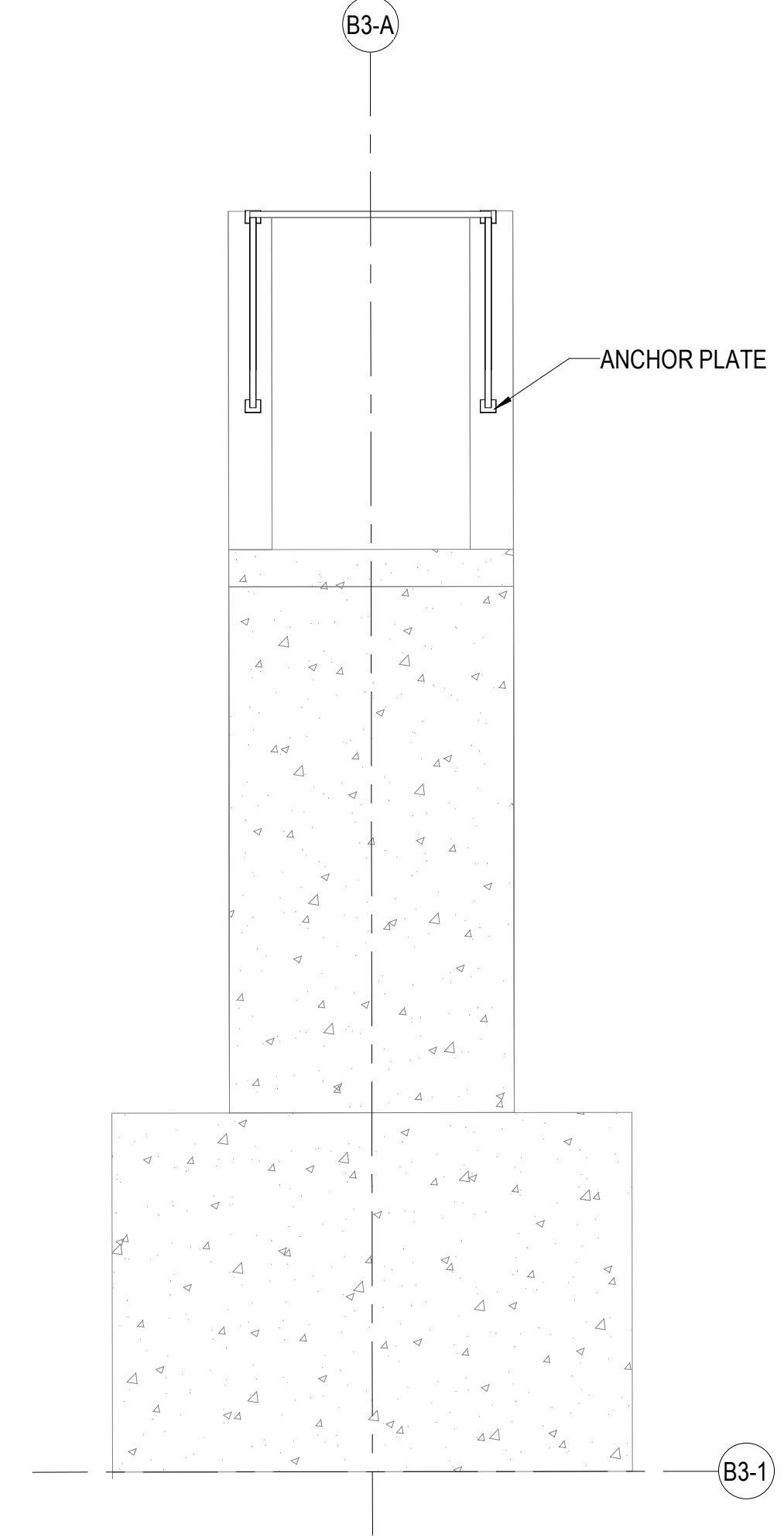
**4 CABLE HUT EAST SITE ELEVATION**  
SCALE: 1/4" = 1'-0"  
4' 2' 0' 4' 8'



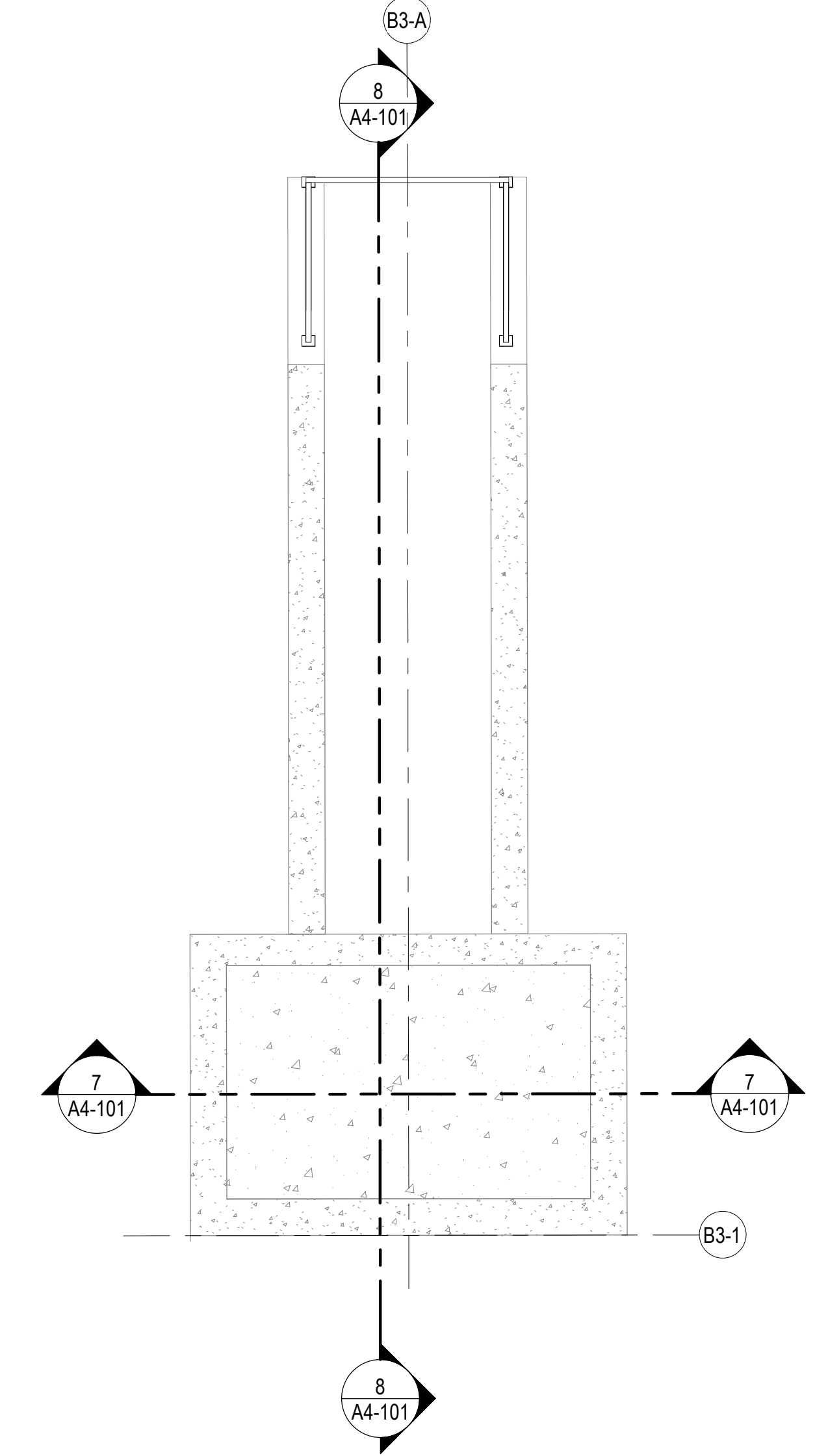
**5 CABLE HUT SOUTH SITE ELEVATION**  
SCALE: 1/4" = 1'-0"  
4' 2' 0' 4' 8'



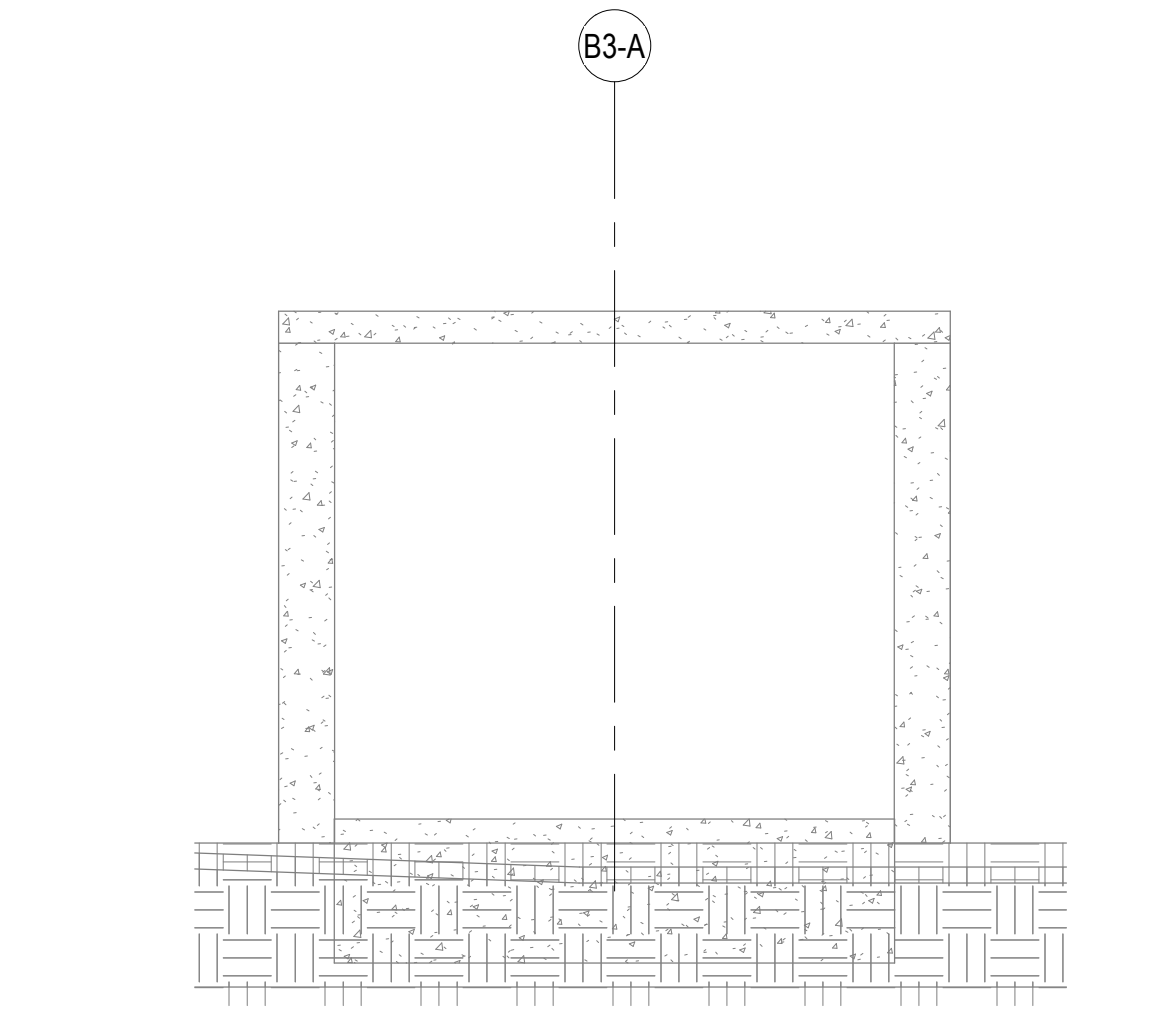
**6 CABLE HUT WEST SITE ELEVATION**  
SCALE: 1/4" = 1'-0"  
4' 2' 0' 4' 8'



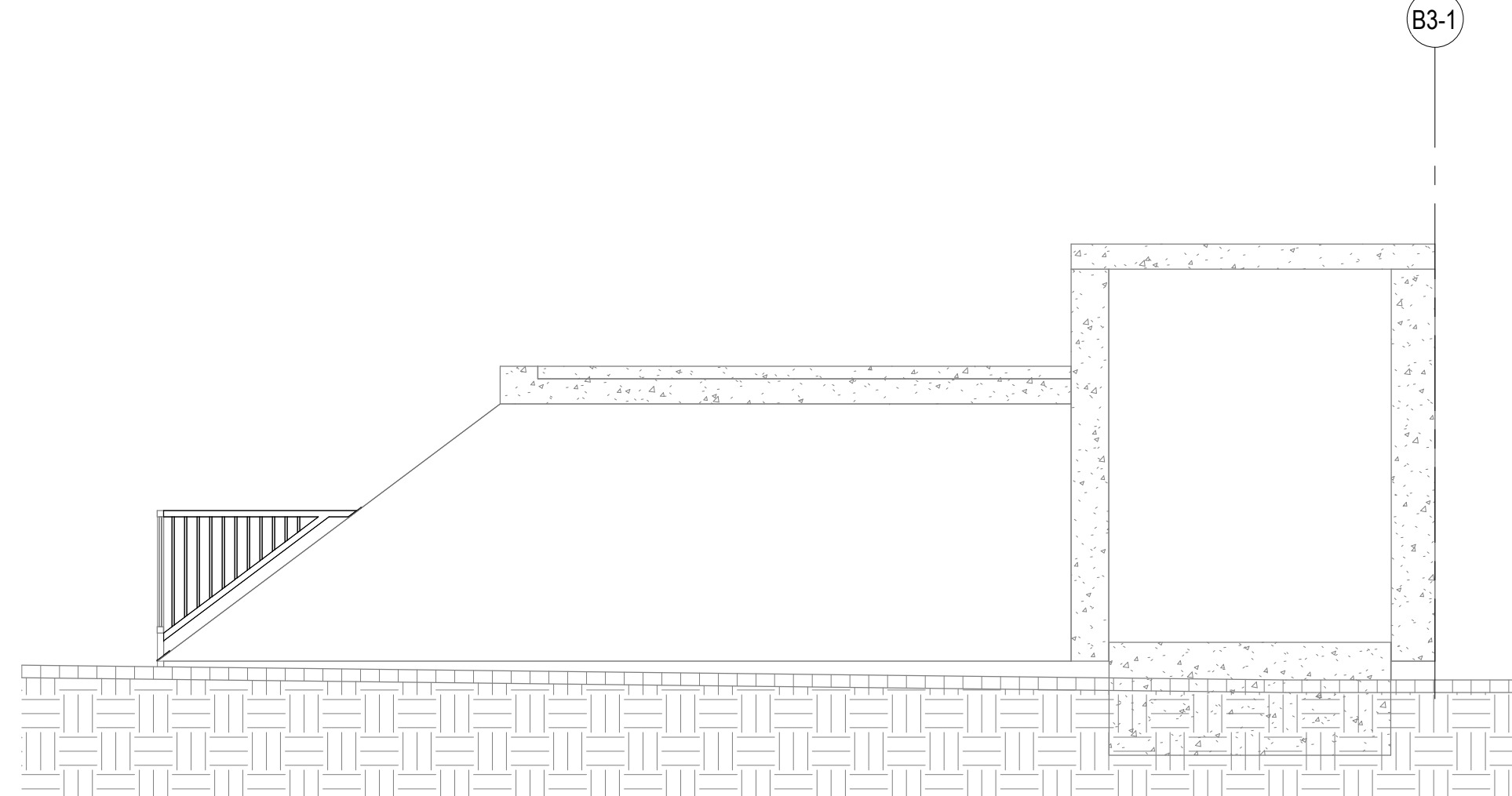
**2 CABLE HUT ROOF PLAN**  
SCALE: 1/4" = 1'-0"  
4' 2' 0' 4' 8'



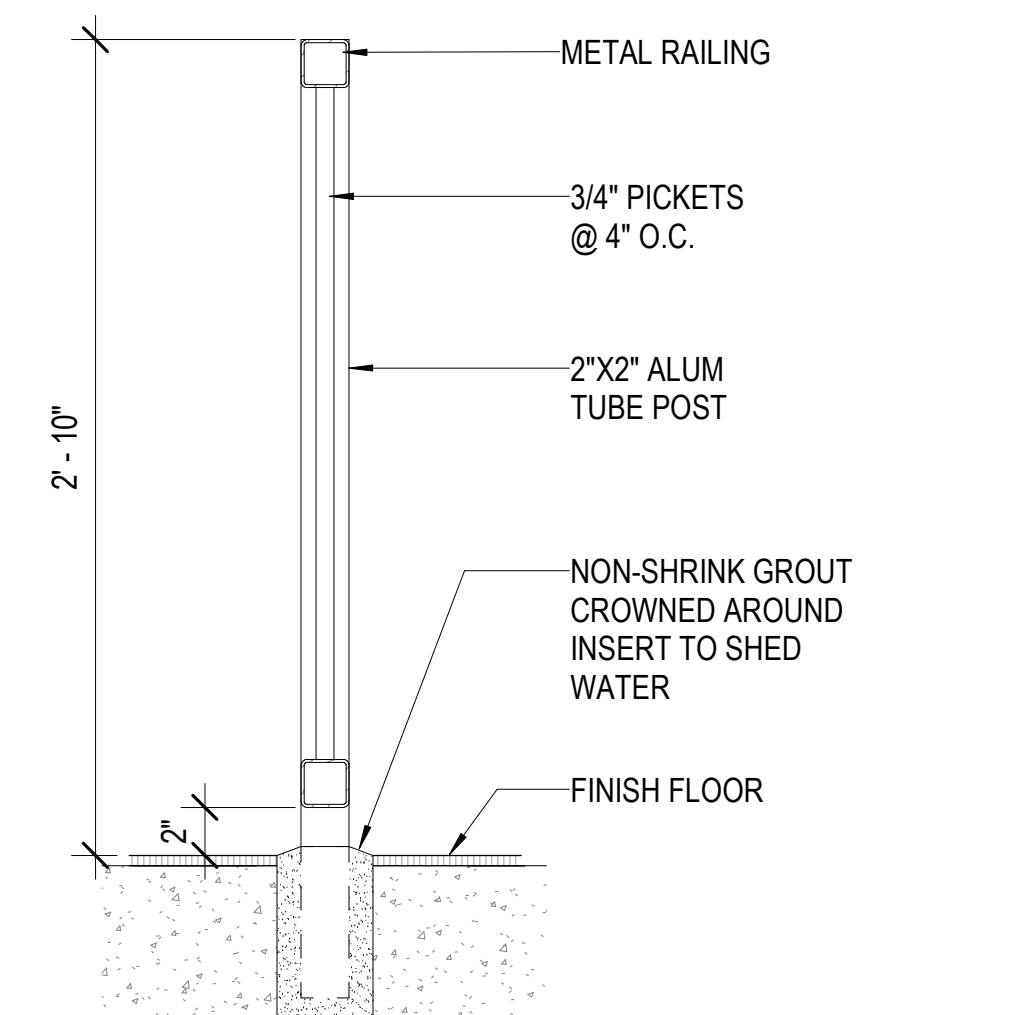
**1 CABLE HUT FLOOR PLAN**  
SCALE: 1/4" = 1'-0"  
4' 2' 0' 4' 8'



**7 CABLE HUT (TRAIN)\_CROSS SECTION**  
SCALE: 1/4" = 1'-0"  
4' 2' 0' 4' 8'

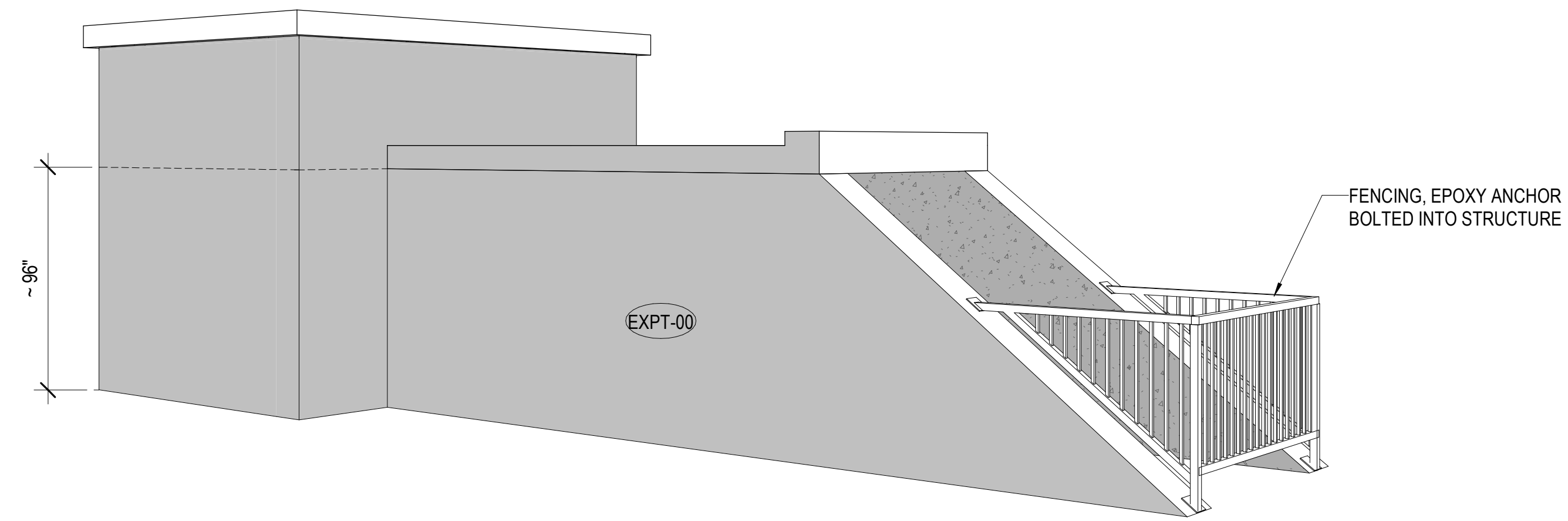


**8 CABLE HUT (TRAIN)\_LONGITUDINAL SECTION**  
SCALE: 1/4" = 1'-0"  
4' 2' 0' 4' 8'

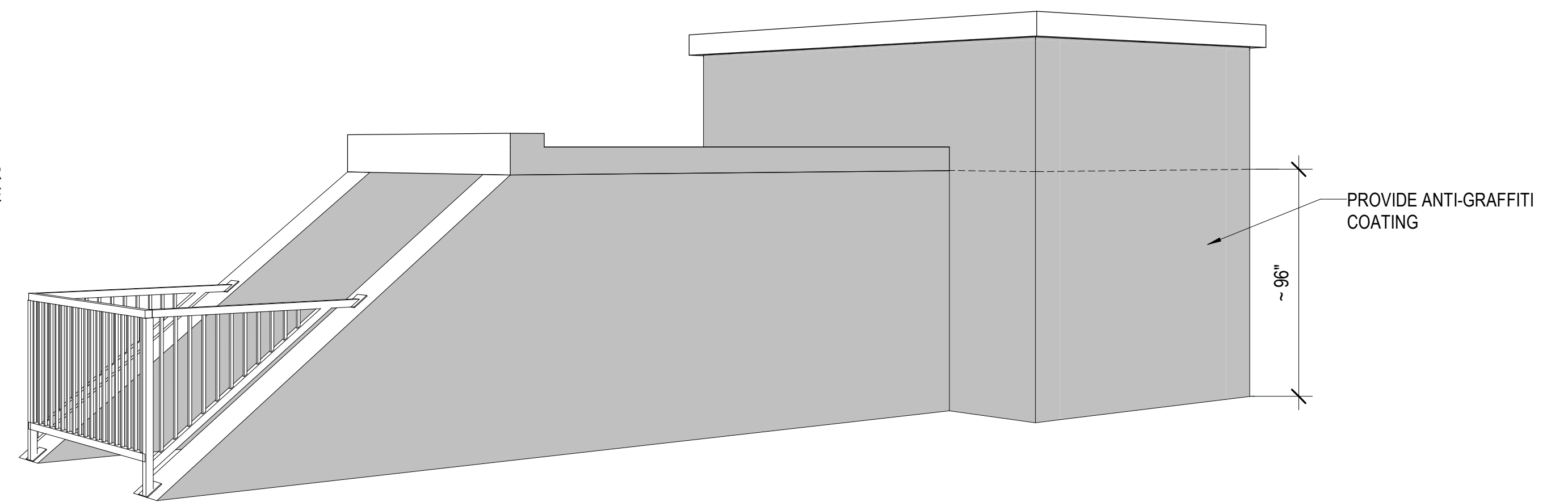


**9 HANDRAIL POST DETAIL**  
SCALE: 1 1/2" = 1'-0"  
8' 4' 0' 8' 16'

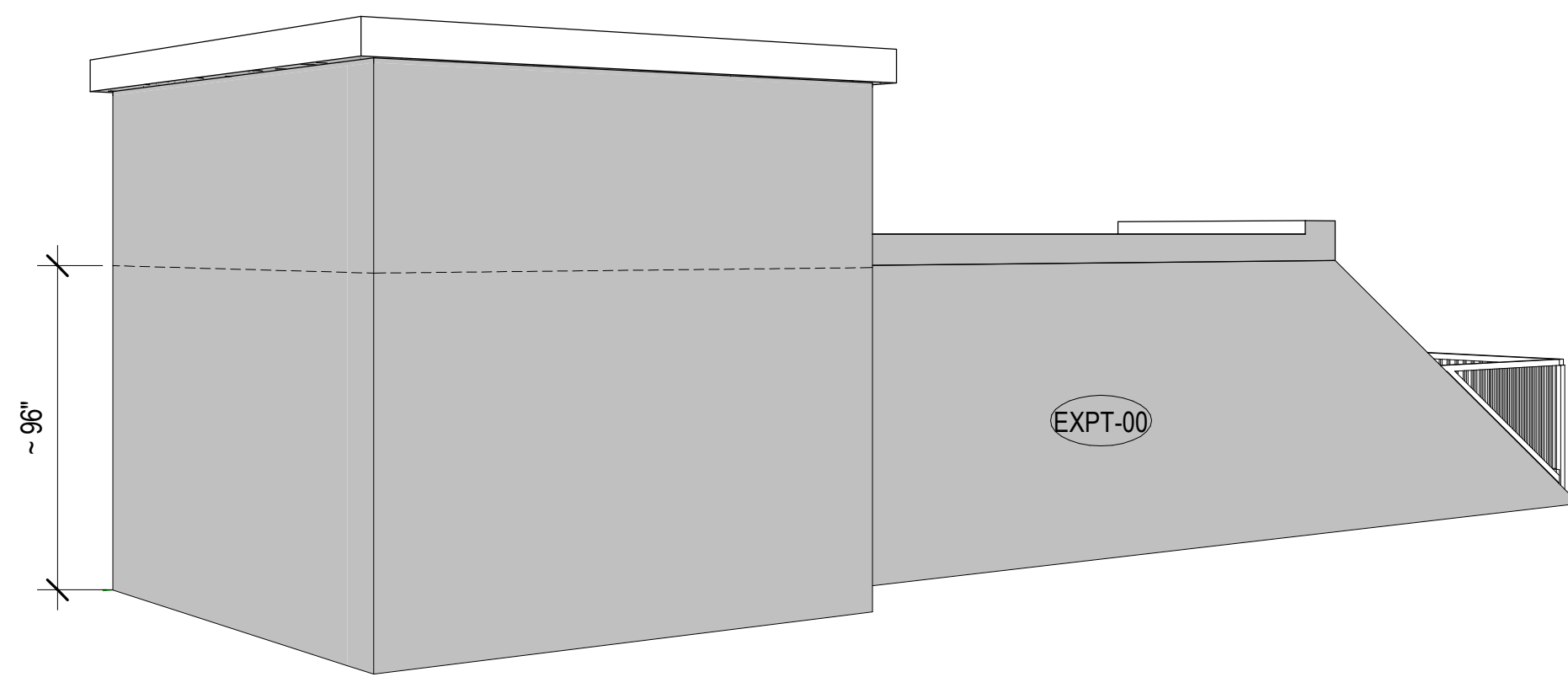
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
<p>STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION</p> <p><b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006</p> <p><b>CABLE HUT FLOOR PLAN AND ELEVATIONS</b></p>					
DESIGNED:	G70	SUBMITTED: BID SUBMITTAL	DL	DATE:	04/13/2026
CHECKED:	G70	SCALE:	As indicated		
APPROVED:					
<p>THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION</p>		<p>Dina Lau E-signed 2026-04-17 08:22AM HST dina.lau@hawaii.gov State of Hawaii Civil Engineer</p>			<p><b>A4-101</b></p>



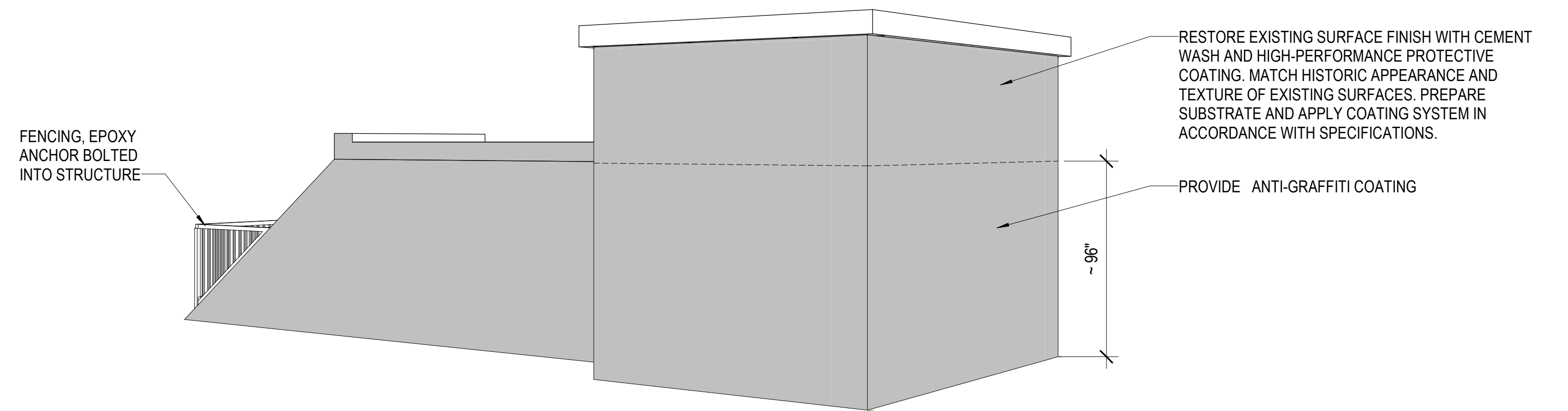
**2** CABLE HUT PERSPECTIVE  
SCALE:



**1** CABLE HUT PERSPECTIVE  
SCALE:



**4** CABLE HUT PERSPECTIVE  
SCALE:



**3** CABLE HUT PERSPECTIVE  
SCALE:

NOT TO SCALE. PERSPECTIVE DRAWINGS ARE REPRESENTATIVE OF THE INTENDED HISTORICALLY RESTORED STRUCTURE. DO NOT SCALE FROM THIS DRAWING. REFER TO PLAN, ELEVATION, AND DETAIL DRAWINGS FOR DIMENSIONS AND CONSTRUCTION REQUIREMENTS. MATERIALS, FINISHES, AND SPECIFIC EXTERIOR TREATMENTS SHALL BE AS NOTED IN THE DRAWINGS AND SPECIFICATIONS.

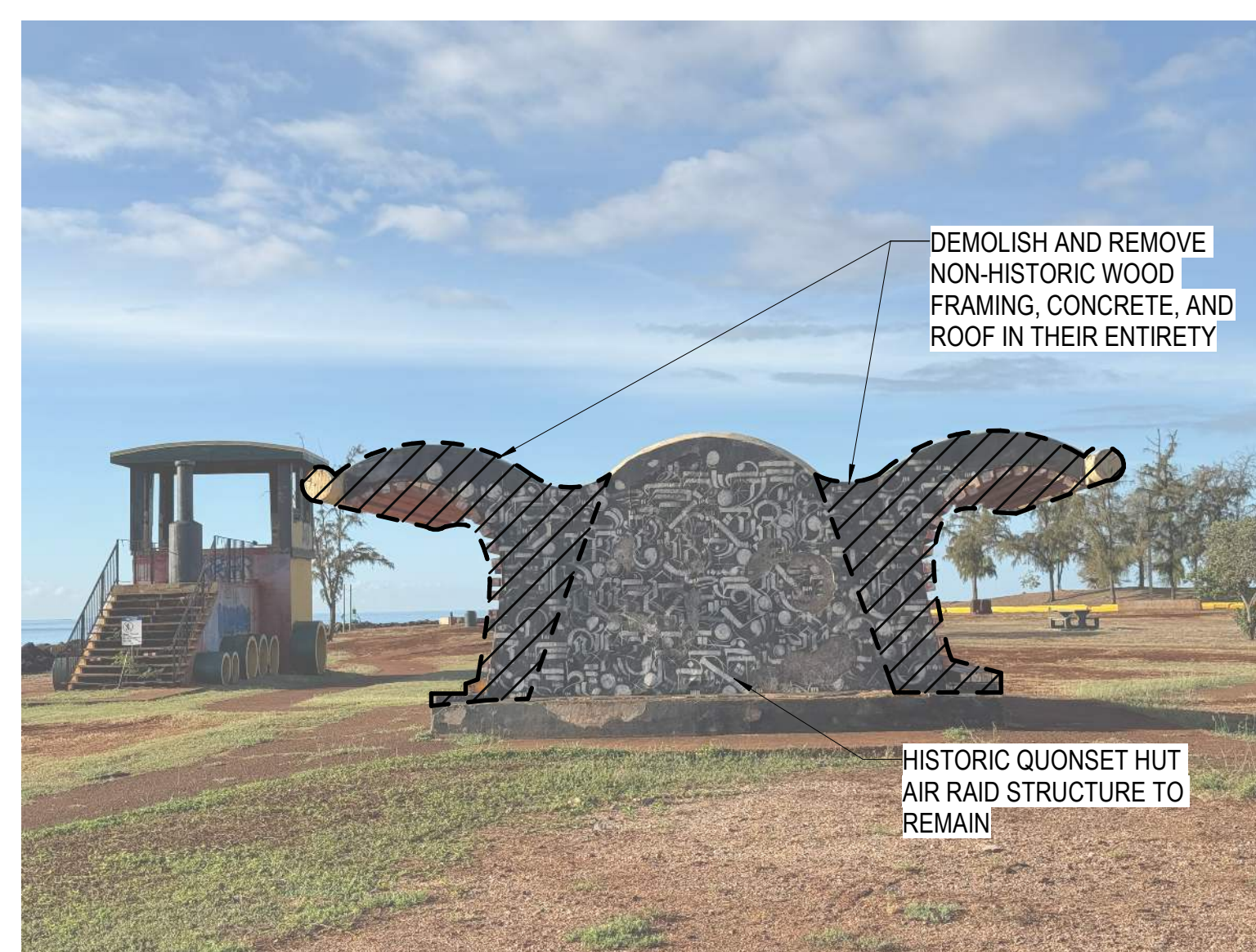
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION <b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006 <b>CABLE HUT PERSPECTIVE VIEWS</b>					
DESIGNED: JS		SUBMITTED: BID SUBMITTAL <i>DL</i>			
DRAWN: G70		DATE: 04/13/2026			
CHECKED: KC		SCALE: AS NOTED			
APPROVED:		Dina Lau E-signed 2026-04-17 08:22AM HST dina.lau@hawaii.gov State of Hawaii Civil Engineer			

**GENERAL NOTES**

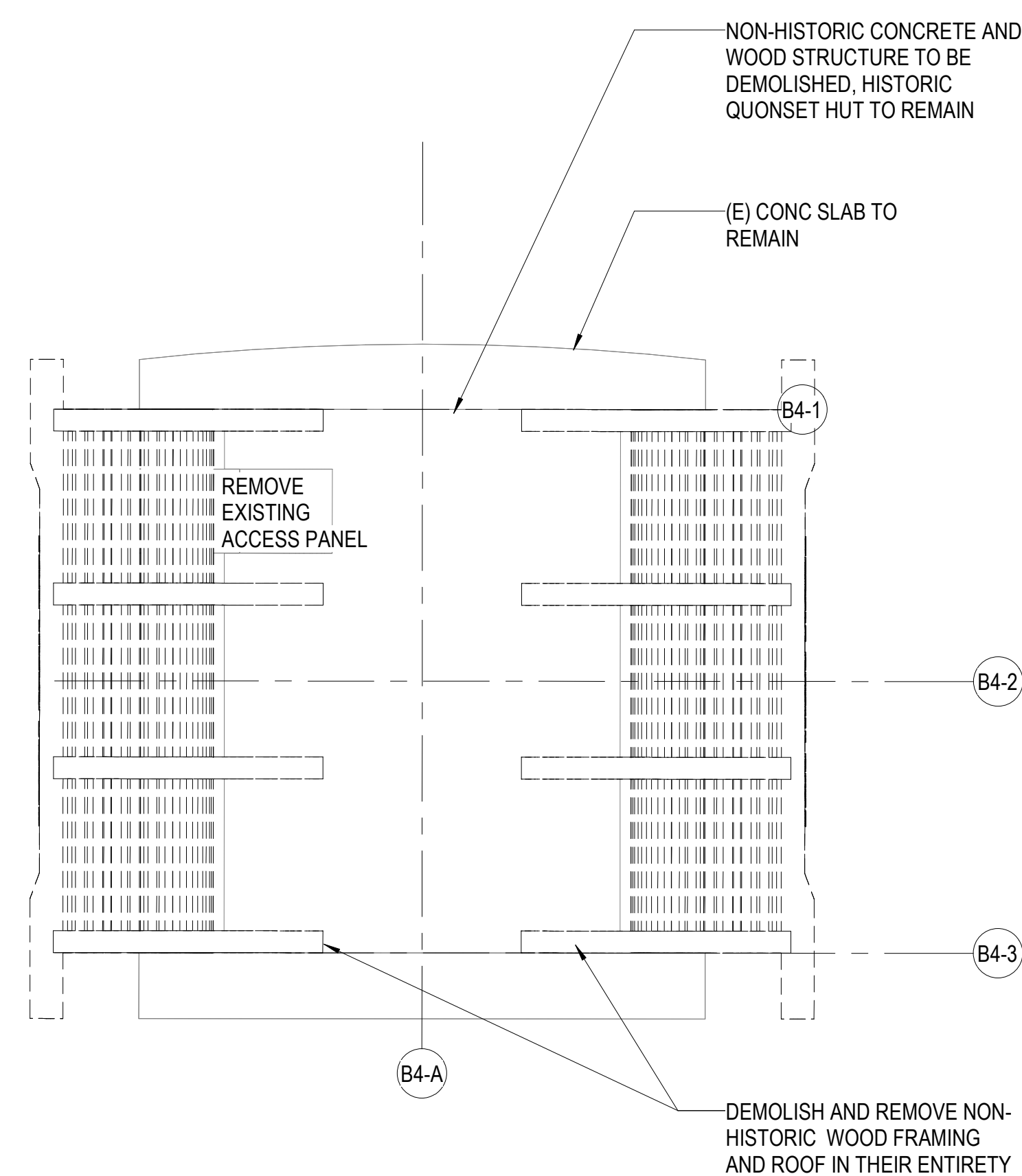
**NOTE:**  
THE CONTRACTOR SHALL CLEARLY MARK ALL NON-HISTORIC ELEMENTS IDENTIFIED FOR REMOVAL AND REVIEW THE PROPOSED DEMOLITION LIMITS WITH THE ENGINEER PRIOR TO COMMENCING ANY DEMOLITION WORK.



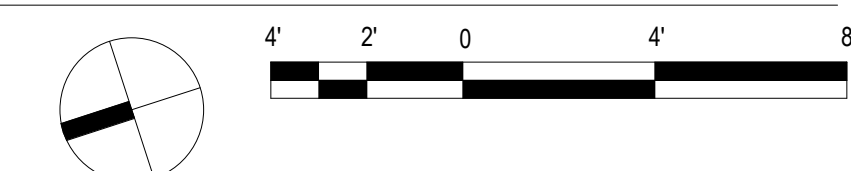
**2 AIR RAID TRAIN STATION EAST ELEVATION (PHOTO)**  
SCALE: 3" = 1'-0"



**3 AIR RAID TRAIN STATION SOUTH ELEVATION (PHOTO)**  
SCALE: 3" = 1'-0"



**1 EXISTING / DEMOLITION FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



**DEMOLITION / HISTORIC PRESERVATION NOTE:**  
SELECTIVE DEMOLITION SHALL BE UNDERTAKEN IN A MANNER THAT PRESERVES AND PROTECTS THE EXISTING HISTORIC CONCRETE STRUCTURE AND ITS CHARACTER-DEFINING FORM AND DETAILING. REMOVE ONLY NON-HISTORIC ELEMENTS AND LATER ALTERATIONS INDICATED FOR REMOVAL. METHODS SHALL BE NON-DESTRUCTIVE TO THE MAXIMUM EXTENT PRACTICABLE AND SHALL NOT IMPAIR THE ORIGINAL CONCRETE MASSING, GEOMETRY, EDGES, REVEALS, OR SURFACE EXPRESSION. ALL EXPOSED EDGES RESULTING FROM SELECTIVE DEMOLITION SHALL BE NEATLY CUT, FINISHED, AND FREE OF JAGGED OR SHARP EDGES. CONTRACTOR SHALL ENSURE THAT NO HAZARDOUS CONDITIONS ARE CREATED DURING OR AFTER DEMOLITION, AND ALL SURFACES SHALL BE LEFT IN A SAFE, STABLE, AND WORKMANLIKE CONDITION. UPON COMPLETION OF REMOVALS, PREPARE THE EXPOSED HISTORIC CONCRETE TO RECEIVE SPECIFIED CEMENT WASH AND PAINT FINISH TO RESTORE THE VISUAL INTEGRITY AND HISTORIC READING OF THE ORIGINAL CONCRETE CONSTRUCTION. PATCH, REPAIR, OR REPLACEMENT OF DAMAGED HISTORIC CONCRETE CAUSED BY DEMOLITION OPERATIONS WILL NOT BE PERMITTED WITHOUT ARCHITECT REVIEW AND APPROVAL. SEE ADDITIONAL REQUIREMENT IN PROJECT SPECIFICATION.

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:

EXPIRES 4/30/2028

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

**SAND ISLAND SRA PARK IMPROVEMENTS PH. VI**  
TAX MAP KEY: 1-5-041:006  
**EXISTING AIR RAID SHELTER (TRAIN STATION)  
DEMOLITION SCOPE**

DESIGNED: JS  
DRAWN: G70  
CHECKED: KC  
APPROVED: -

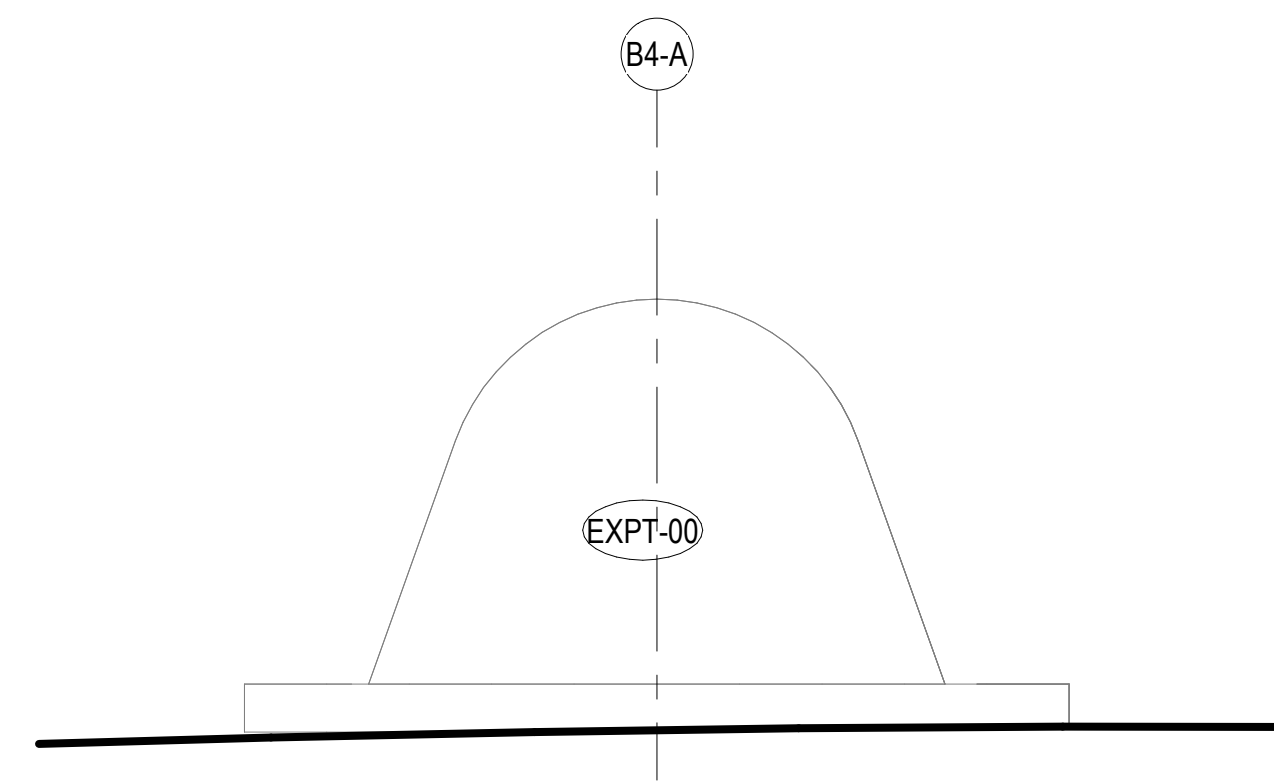
DATE: 04/13/2026  
SCALE: AS NOTED

Submitted: BID SUBMITTAL *DL*

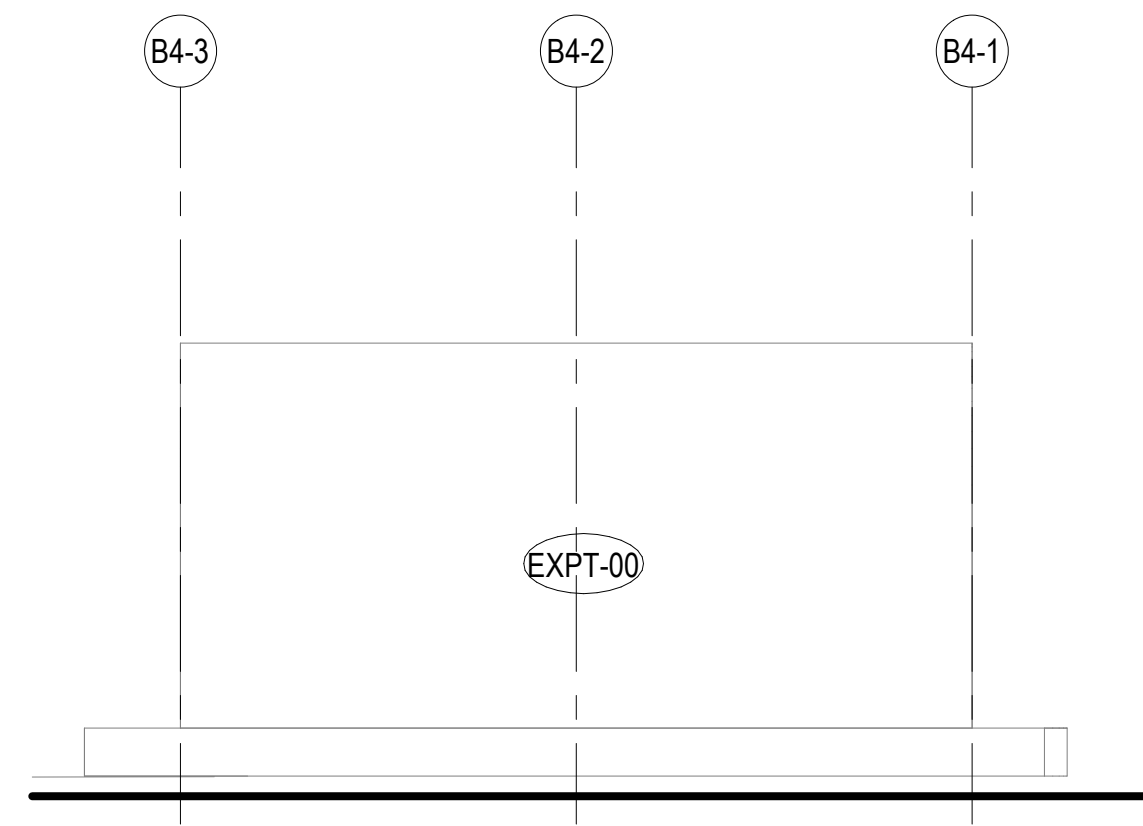
Dina Lau  
E-signed 2026-04-17 08:22AM HST  
dina.lau@hawaii.gov  
State of Hawaii  
Civil Engineer

**D5-101**

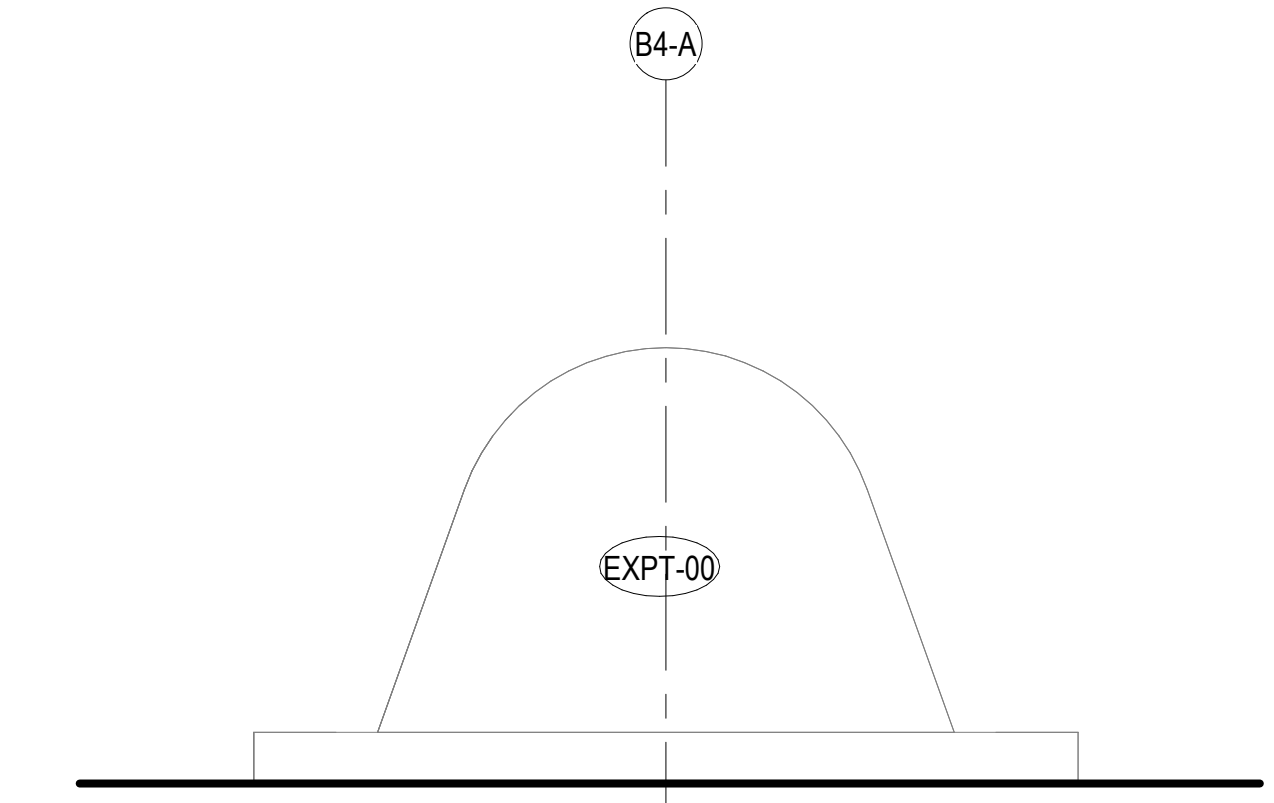
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION



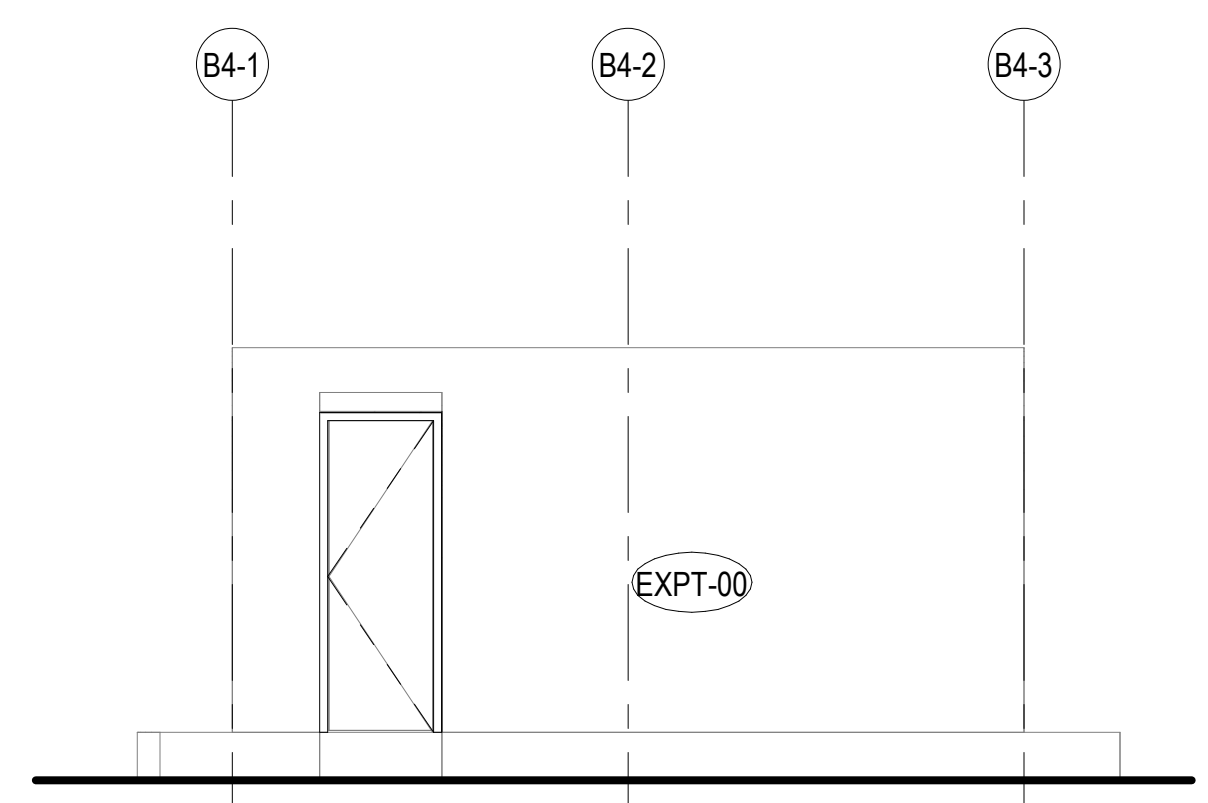
**3 AIR RAID SHELTER NORTH ELEVATION**  
SCALE: 1/4" = 1'-0"



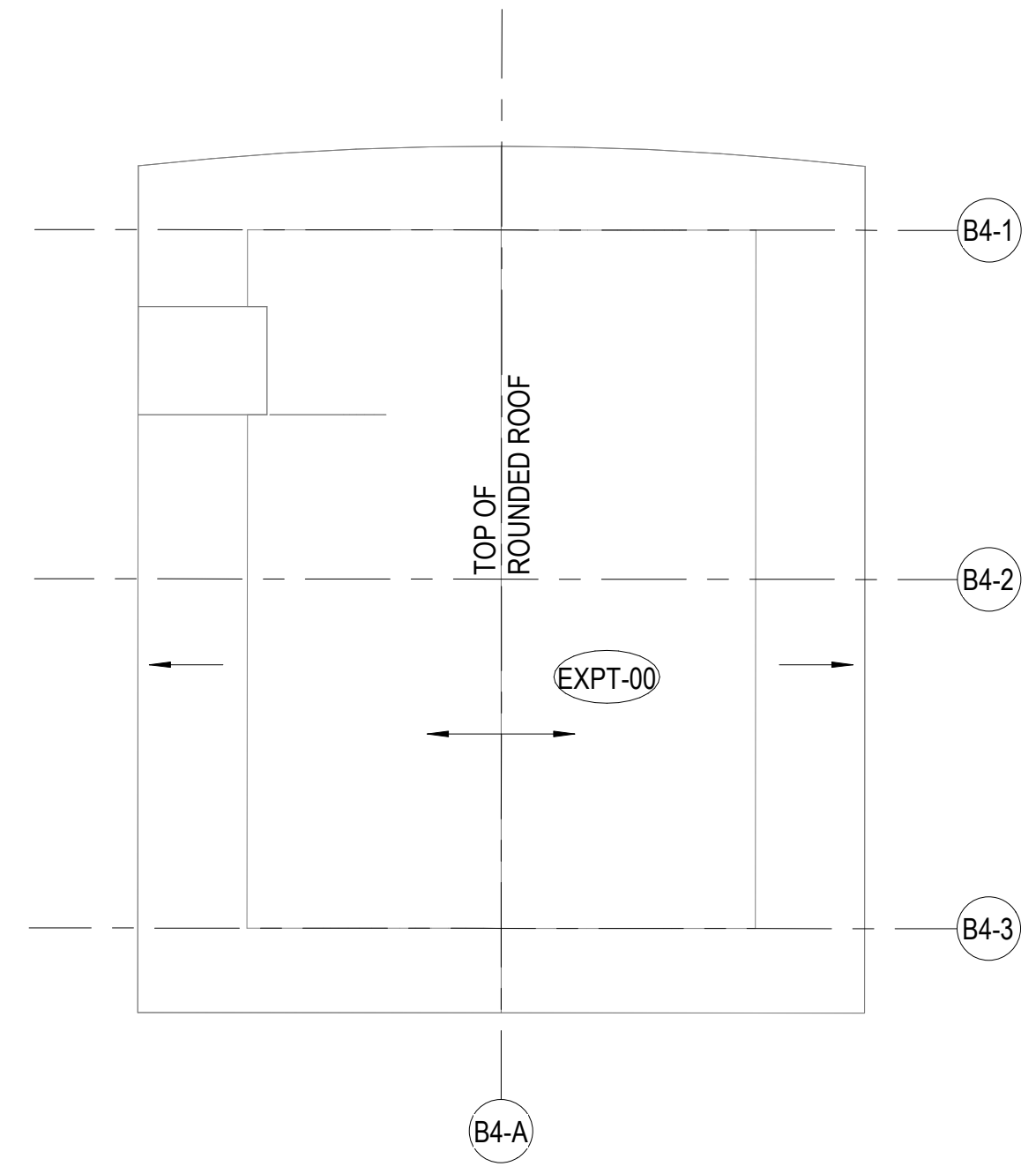
**4 AIR RAID SHELTER EAST ELEVATION**  
SCALE: 1/4" = 1'-0"



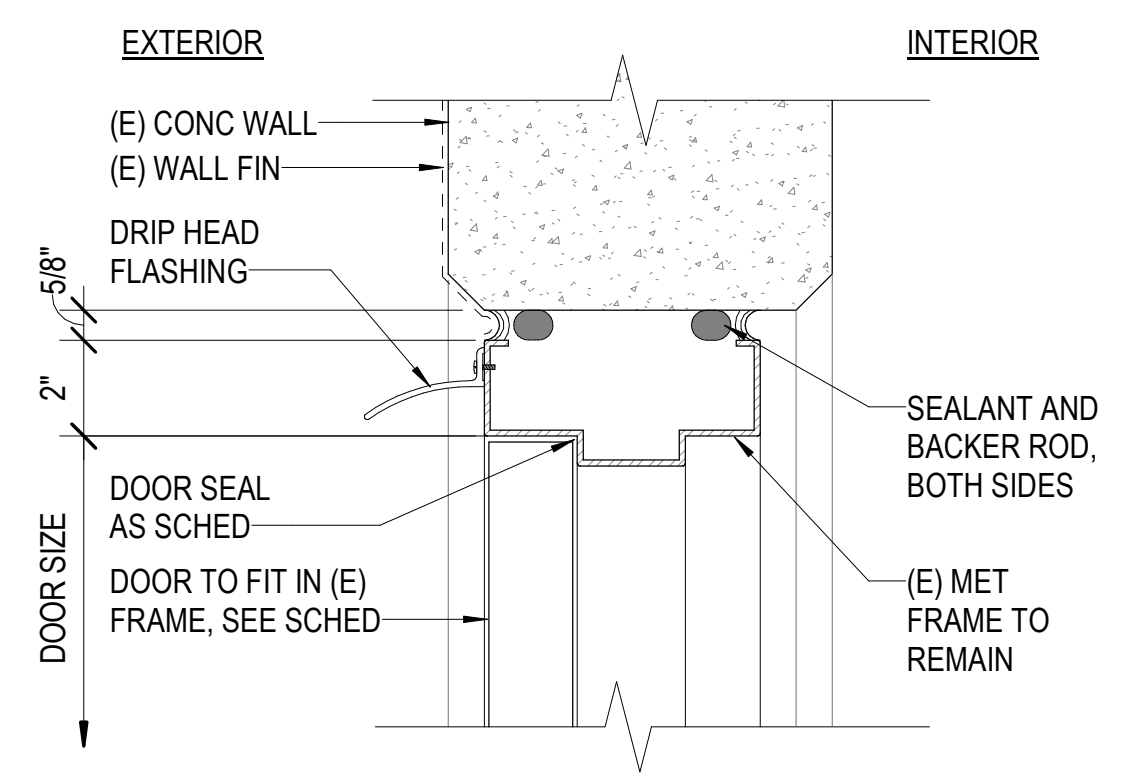
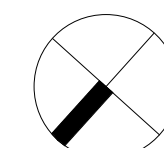
**5 AIR RAID SHELTER SOUTH ELEVATION**  
SCALE: 1/4" = 1'-0"



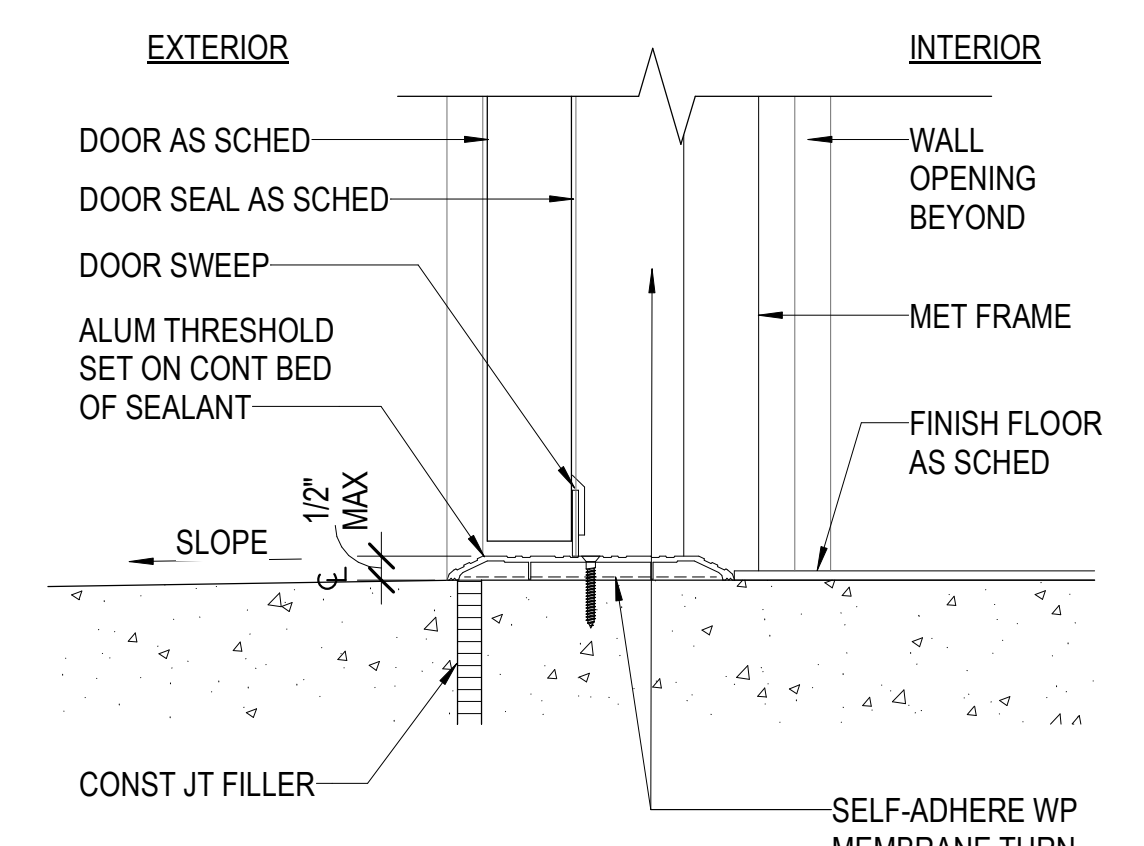
**6 AIR RAID SHELTER WEST ELEVATION**  
SCALE: 1/4" = 1'-0"



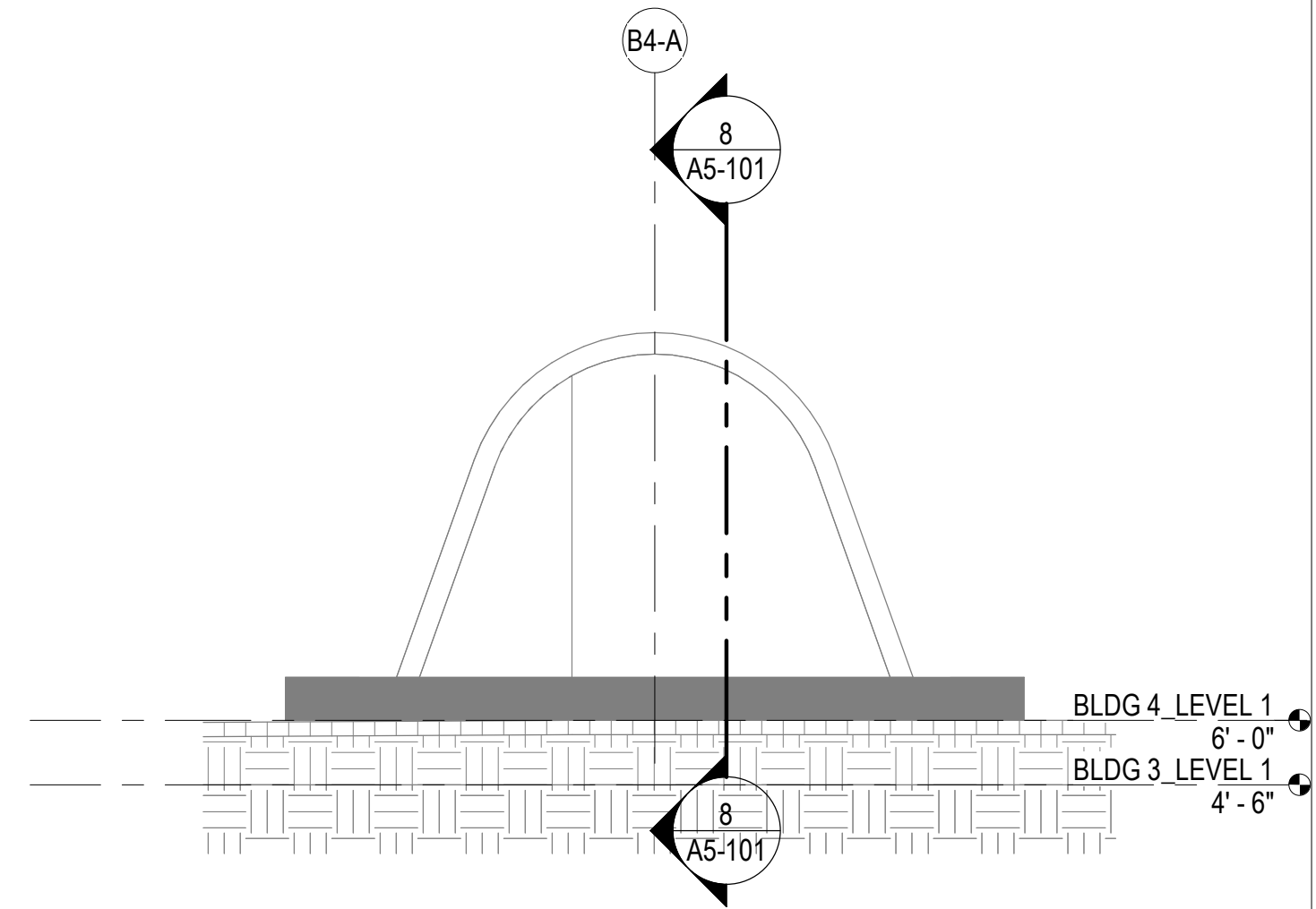
**1 AIR RAID SHELTER ROOF PLAN**  
SCALE: 1/4" = 1'-0"



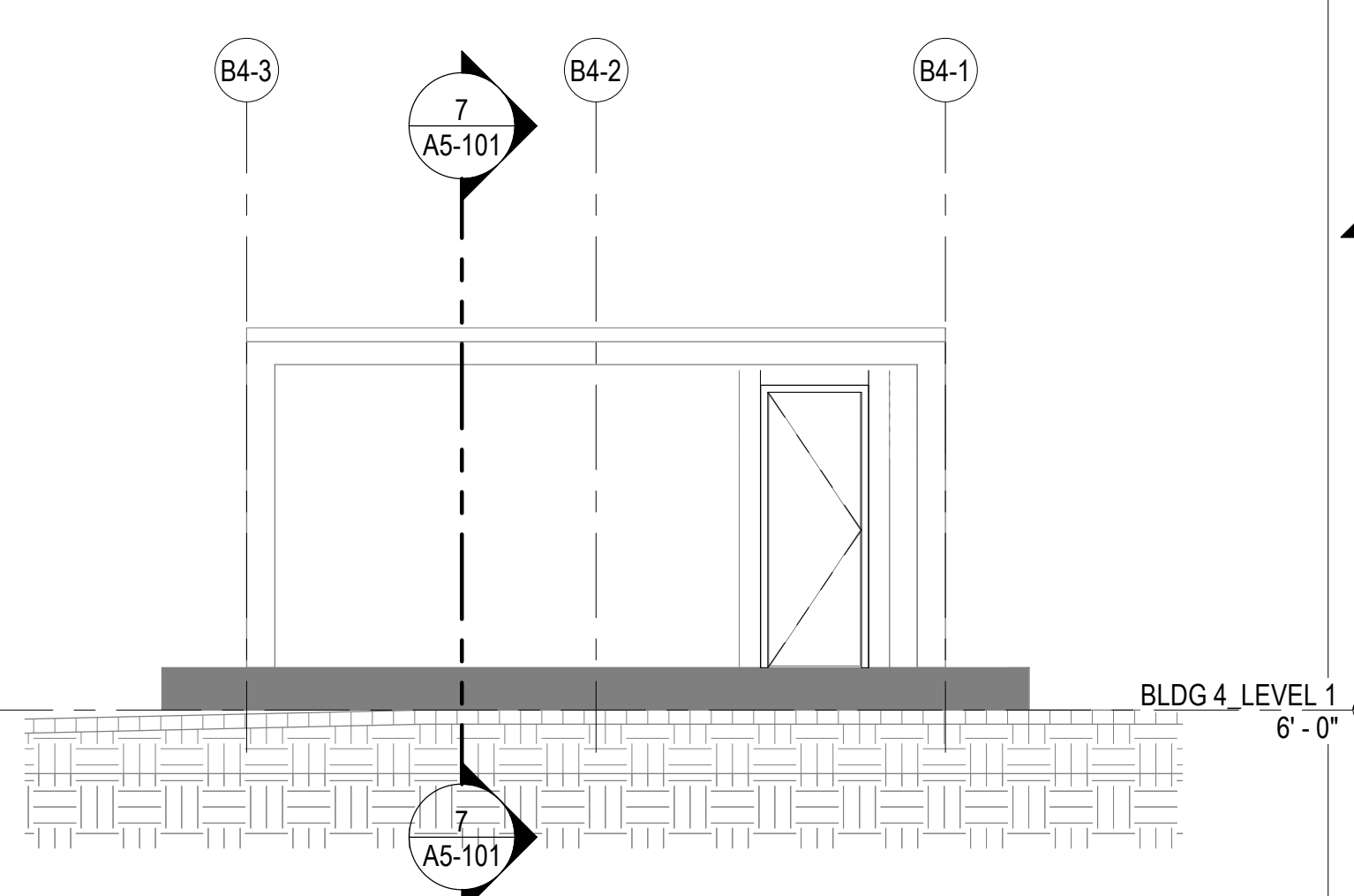
**9 (E) FRAME DR HEAD (JAMB SIM)**  
SCALE: 3" = 1'-0"



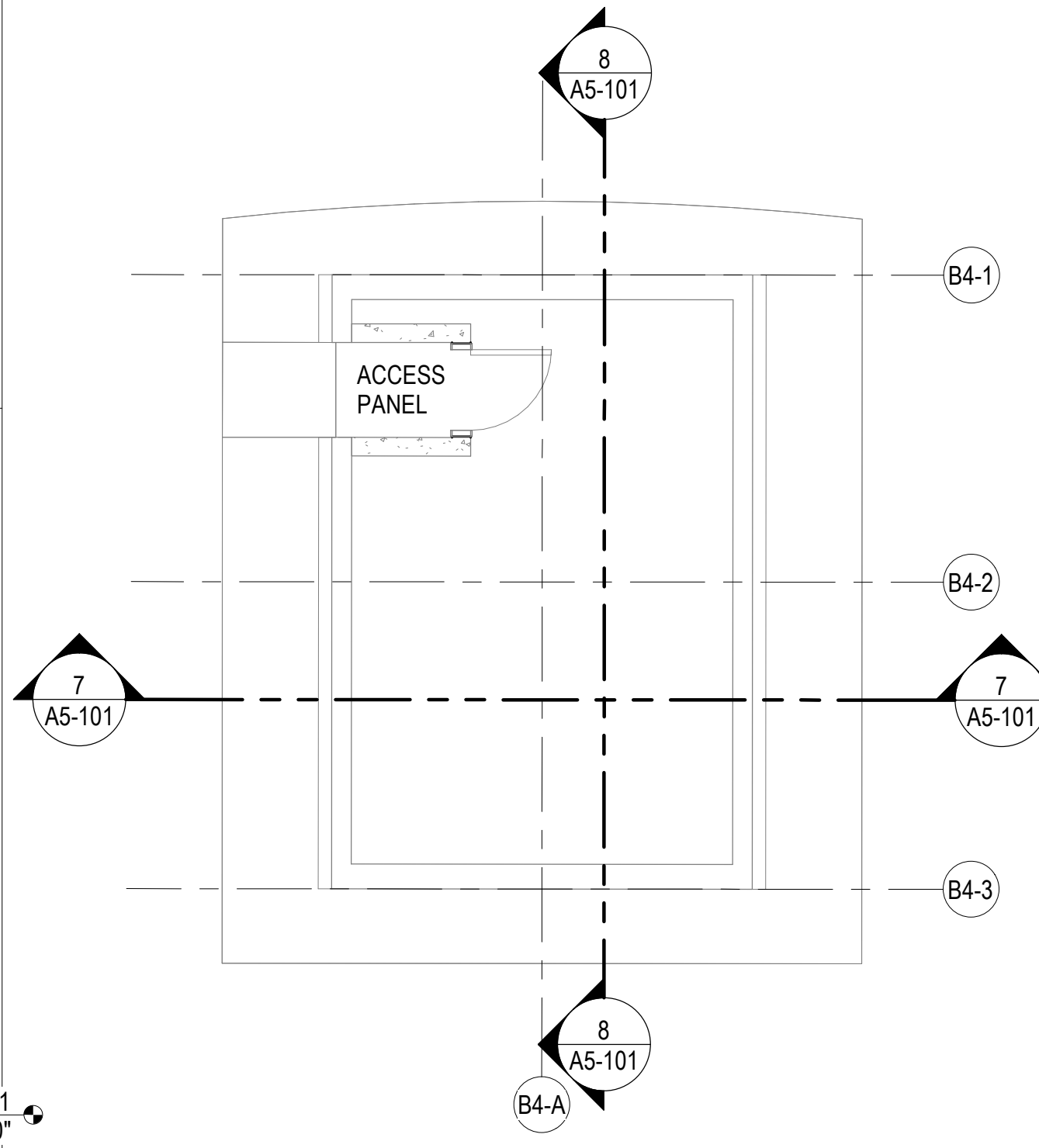
**10 EXT DR THRESHOLD**  
SCALE: 3" = 1'-0"



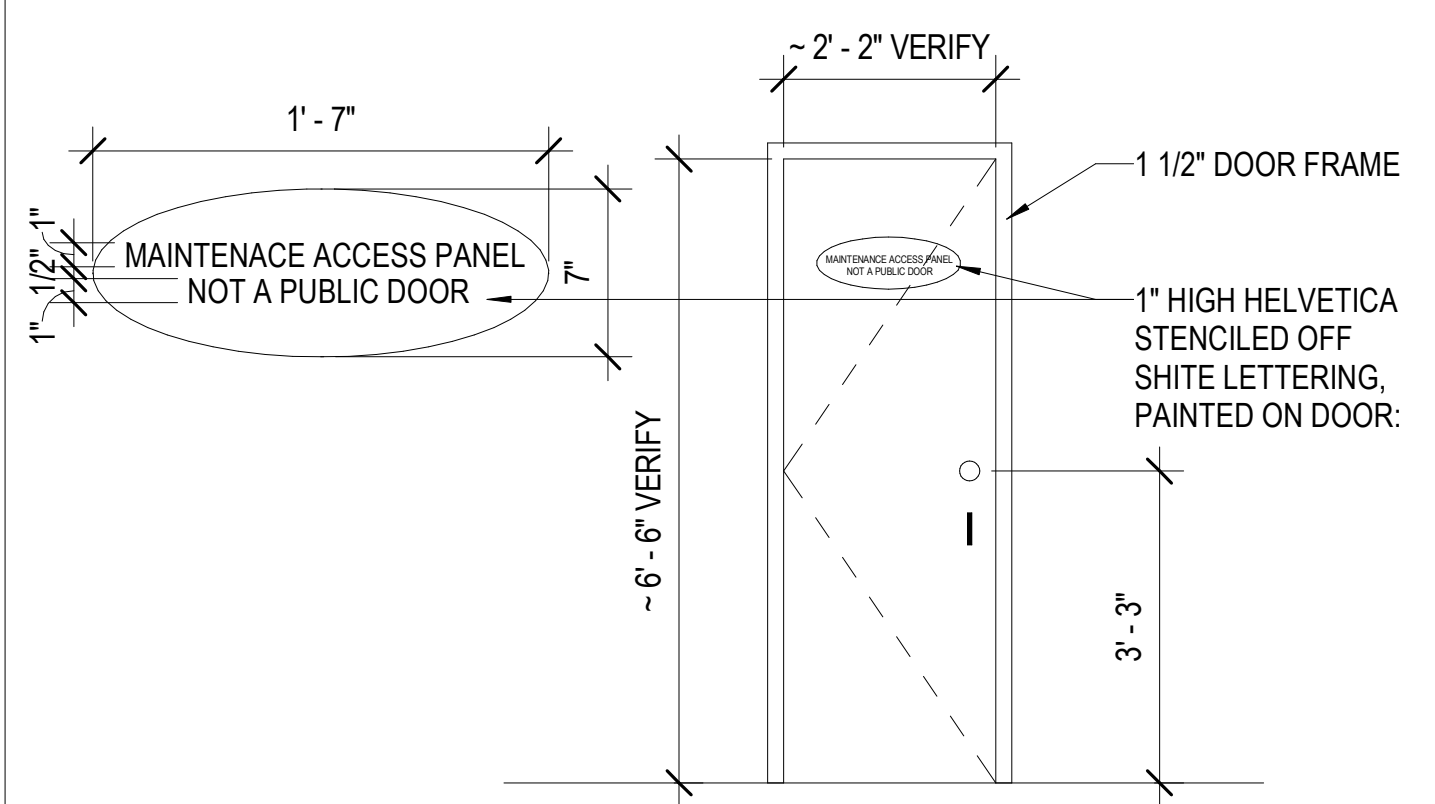
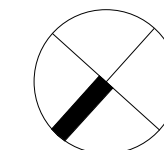
**7 AIR RAID SHELTER CROSS SECTION**  
SCALE: 1/4" = 1'-0"



**8 AIR RAID SHELTER LONGITUDINAL SECTION**  
SCALE: 1/4" = 1'-0"



**2 AIR RAID SHELTER FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



**11 ACCESS PANEL**  
SCALE: 1/2" = 1'-0"



REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:

EXPIRES 4/30/2028

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

**SAND ISLAND SRA PARK IMPROVEMENTS PH. VI**  
TAX MAP KEY: 1-5-041:006

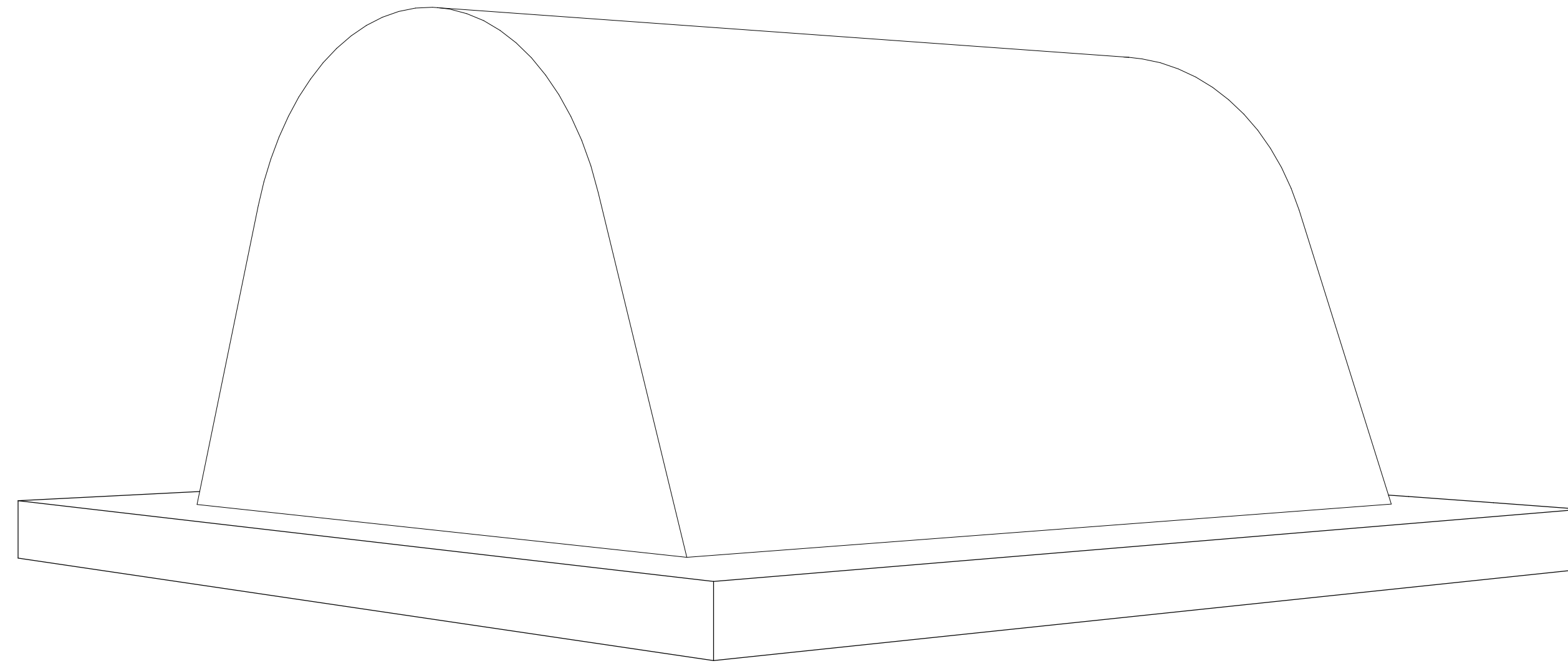
**AIR RAID SHELTER PLANS AND ELEVATIONS**

DESIGNED: JS  
DRAWN: G70  
CHECKED: KC  
APPROVED: -

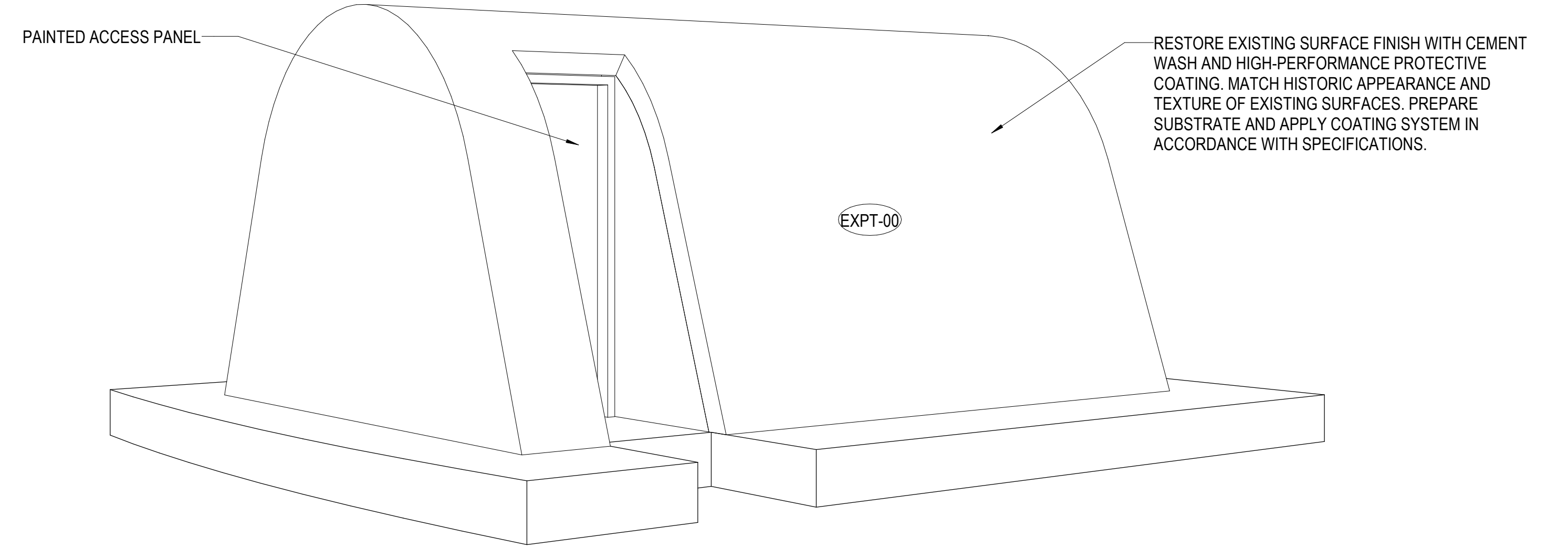
SUBMITTED: BID SUBMITTAL  
DATE: 04/13/2026  
SCALE: AS NOTED

Dina Lau  
E-signed 2026-04-17 08:22AM HST  
dina.u.lau@hawaii.gov  
State of Hawaii  
Civil Engineer

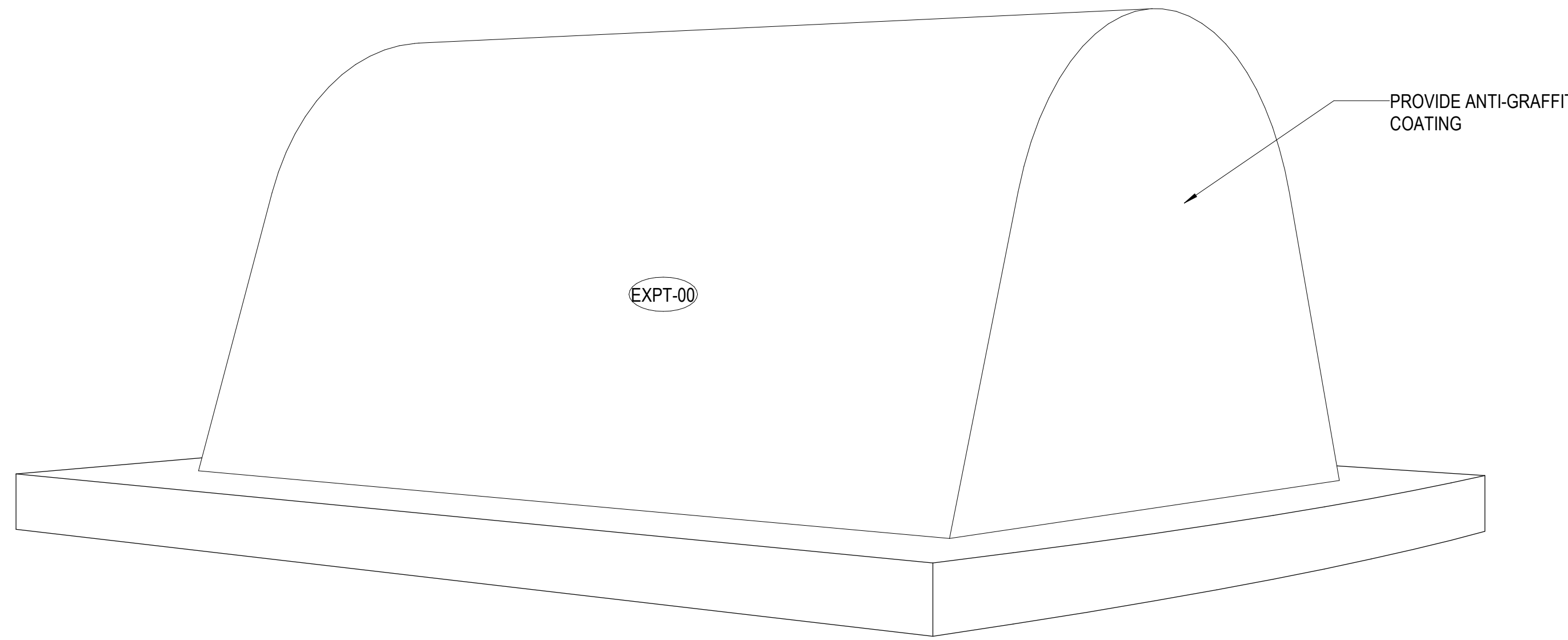
**A5-101**



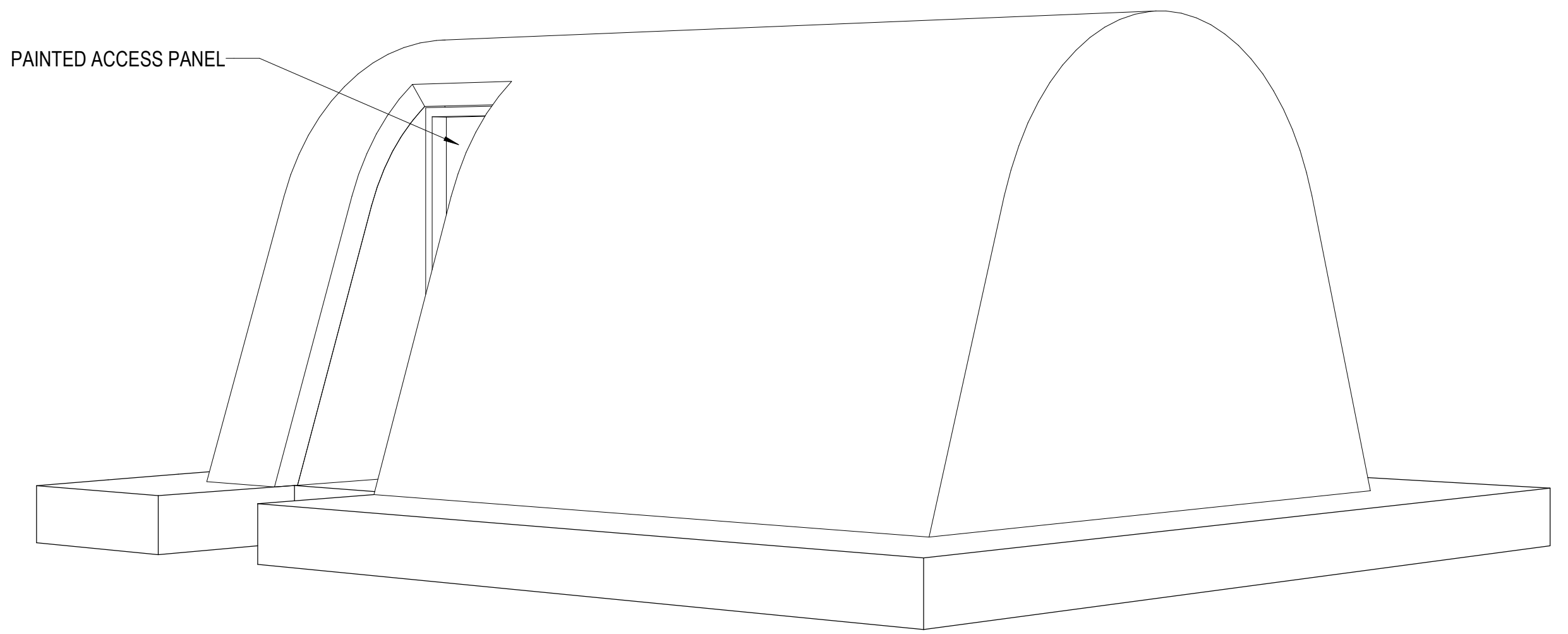
**2** AIR RAID SHELTER PERSPECTIVE  
SCALE:



**1** AIR RAID SHELTER PERSPECTIVE  
SCALE:



**3** AIR RAID SHELTER PERSPECTIVE  
SCALE:



**4** AIR RAID SHELTER PERSPECTIVE  
SCALE:

NOT TO SCALE. PERSPECTIVE DRAWINGS ARE REPRESENTATIVE OF THE INTENDED HISTORICALLY RESTORED STRUCTURE. DO NOT SCALE FROM THIS DRAWING. REFER TO PLAN, ELEVATION, AND DETAIL DRAWINGS FOR DIMENSIONS AND CONSTRUCTION REQUIREMENTS. MATERIALS, FINISHES, AND SPECIFIC EXTERIOR TREATMENTS SHALL BE AS NOTED IN THE DRAWINGS AND SPECIFICATIONS.

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:

EXPIRES 4/30/2028

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STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

**SAND ISLAND SRA PARK IMPROVEMENTS PH. VI**  
TAX MAP KEY: 1-5-041:006

**AIR RAID SHELTER PERSPECTIVE VIEWS**

DESIGNED: JS

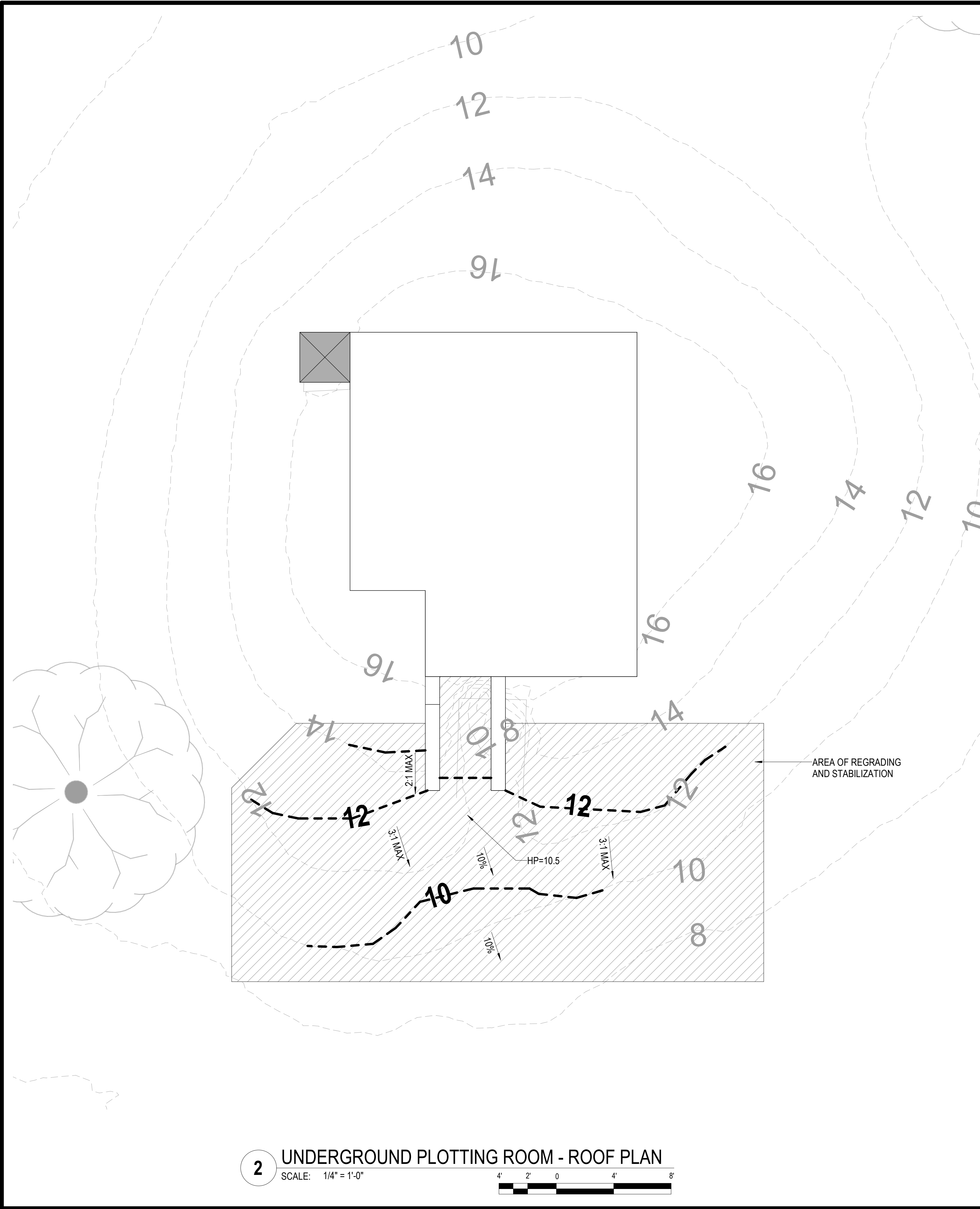
DRAWN: G70      SUBMITTED: BID SUBMITTAL      DL

CHECKED: KC      DATE: 04/13/2026

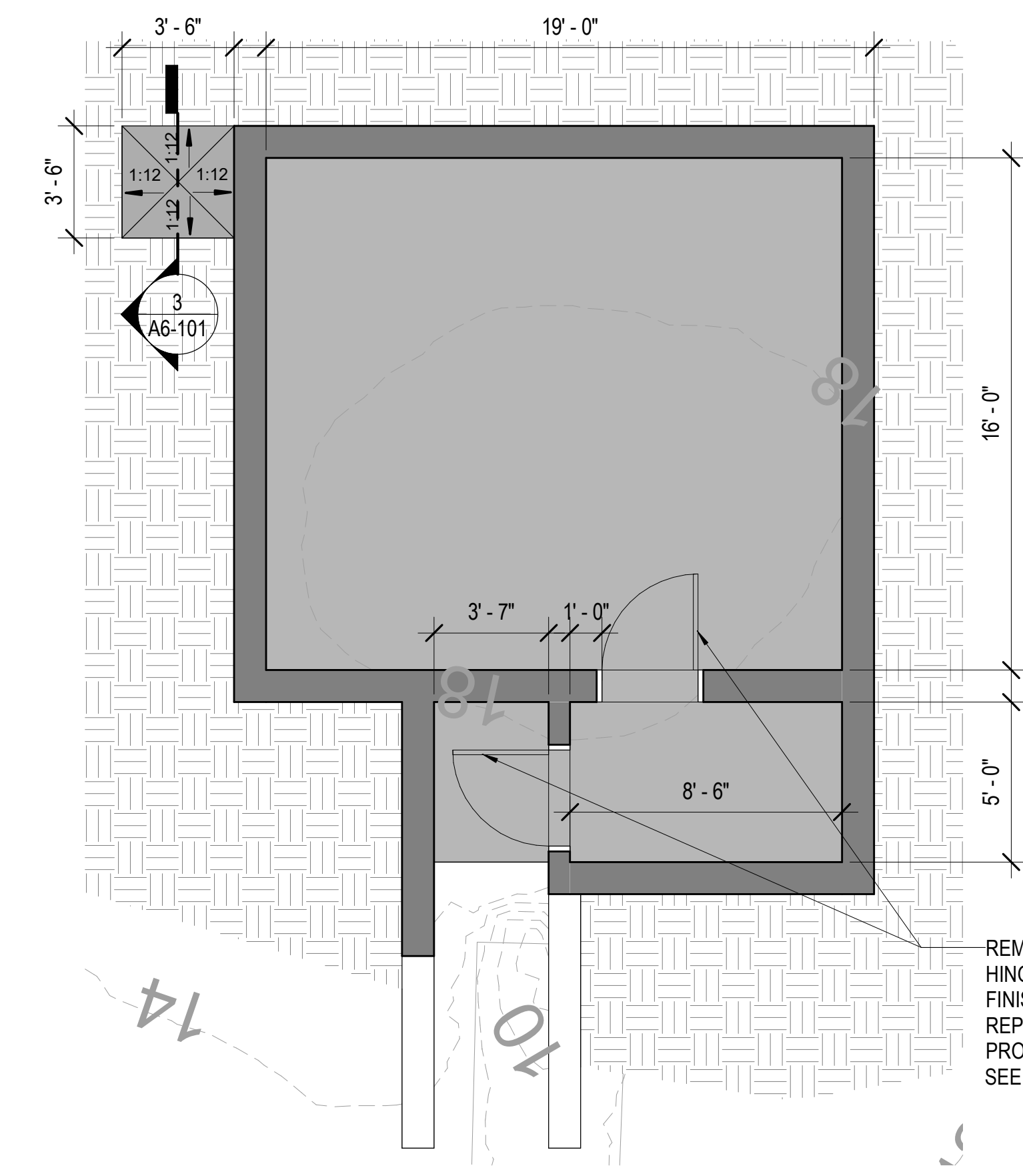
APPROVED:      SCALE: AS NOTED

Dina Lau  
E-signed 2026-04-17 08:22AM HST  
dina.u.lau@hawaii.gov  
State of Hawaii  
Civil Engineer

**A5-102**

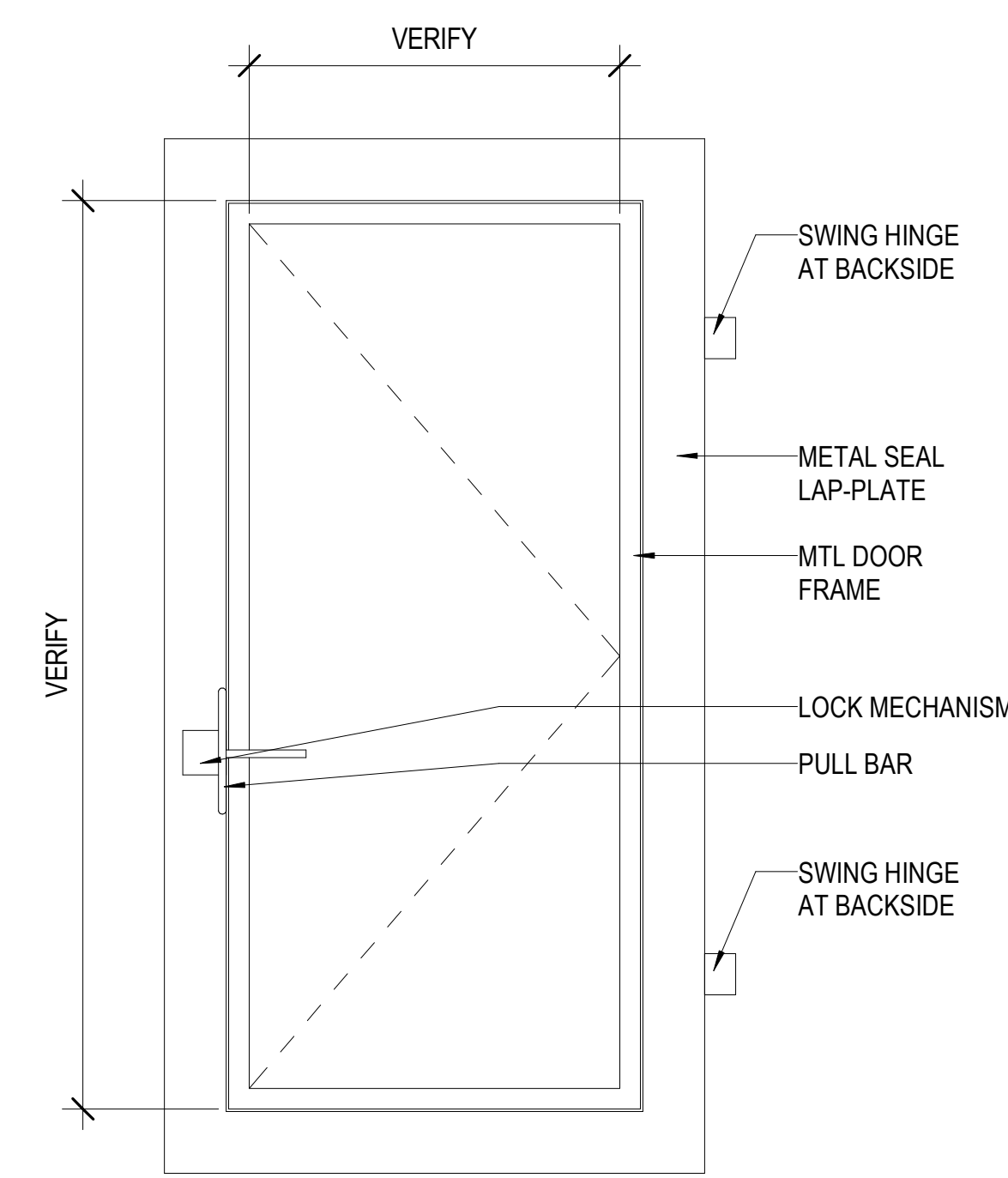


**2 UNDERGROUND PLOTTING ROOM - ROOF PLAN**  
 SCALE: 1/4" = 1'-0"  
 4' 2' 0' 4' 8'

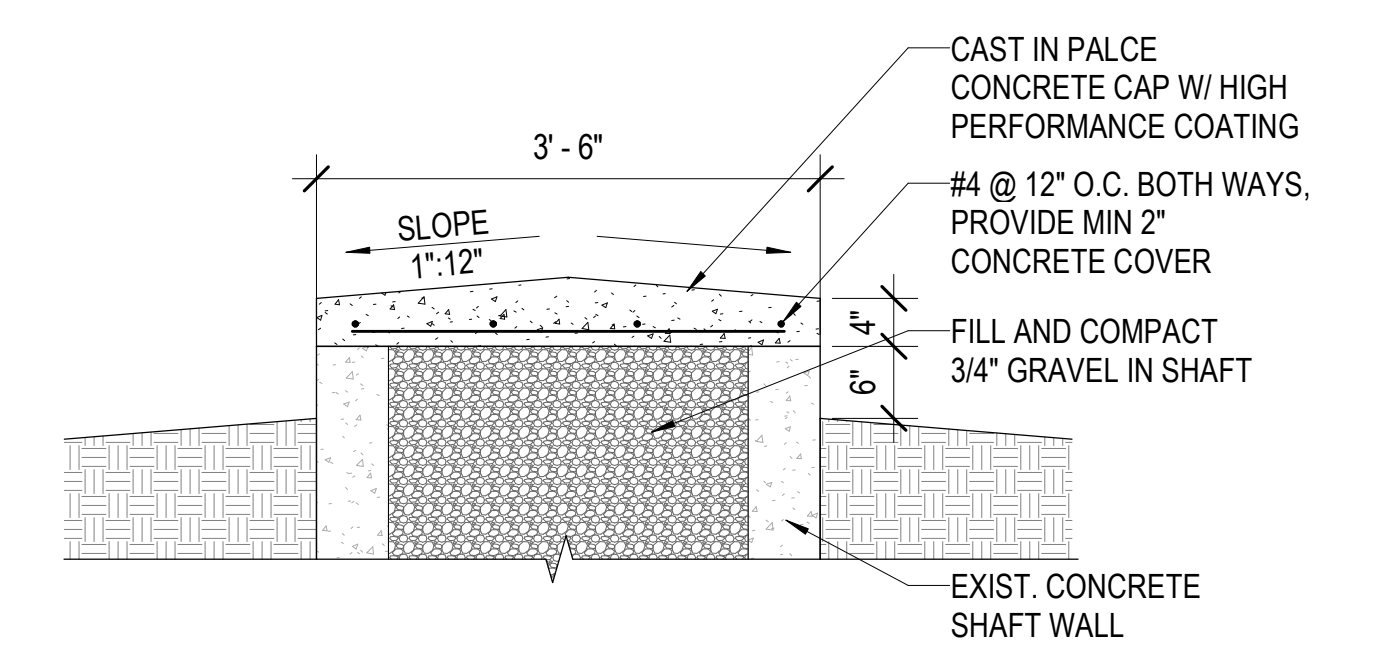


**1 UNDERGROUND PLOTTING ROOM - FLOOR PLAN**  
 SCALE: 1/4" = 1'-0"  
 4' 2' 0' 4' 8'

REMOVE EXISTING HISTORIC STEEL DOORS AND HINGES; FULLY REHABILITATE, REPAIR, AND REFINISH; REINSTALL IN OPERABLE CONDITION. REPLACE LOCK CORE AND DOOR STRIKE TO PROVIDE FUNCTIONAL LOCKING. SEE DET 4/A6-101 THIS SHEET



**4 REHABILITATE HISTORIC DOOR**  
 SCALE: 3/4" = 1'-0"  
 4' 2' 0' 4' 8'



**3 ROOF HATCH-VENT SECTION**  
 SCALE: 3/4" = 1'-0"  
 4' 2' 0' 4' 8'

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED:
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION <b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006 <b>UNDERGROUND PLOTTING ROOM - PLAN</b>					
DESIGNED:	JS	SUBMITTED: BID SUBMITTAL	DL	DATE:	04/13/2026
DRAWN:	G70	CHECKED:	KC	APPROVED:	-
		Dina Lau E-signed 2026-04-17 08:22AM HST dina.u.lau@hawaii.gov State of Hawaii Civil Engineer			
EXPIRES 4/30/2028		<b>A6-101</b>			

**GENERAL**

- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS.
- THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, WIND, SEISMIC, ETC.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. EXISTING CONDITIONS ARE SHOWN TO THE BEST OF OUR KNOWLEDGE. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH FIELD CONDITIONS IN ORDER TO PROPERLY BID THIS PROJECT AND EXECUTE THE WORK REQUIRED BY THESE CONSTRUCTION / BID DOCUMENTS.
- THE CONTRACTOR SHALL REVIEW ALL EXISTING CONDITIONS TO DETERMINE ALL SERVICES AFFECTED BY THE WORK AND MAKE ANY NECESSARY TEMPORARY OR PERMANENT CONNECTIONS TO MAINTAIN THESE SERVICES. THE CONTRACTOR SHALL SUBMIT THE METHODS AND SCHEDULE OF THESE CONNECTIONS TO THE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK.
- THE CONTRACTOR SHALL INSPECT THE EXISTING BUILDING TO SURVEY THE EXISTING CONDITIONS BEFORE STARTING ANY WORK. ANY DAMAGE CAUSED BY THE CONTRACTOR AS A RESULT OF WORK PERFORMED IN THIS PROJECT SHALL BE REPAIRED OR REPLACED TO ITS ORIGINAL CONDITION BY THE CONTRACTOR. AREAS OF EXISTING SURFACES NEWLY EXPOSED AS THE RESULT OF THE WORK SHALL BE PATCHED AND FINISHED TO MATCH EXISTING ADJACENT FINISHED SURFACES.
- DRAWINGS INDICATE TYPICAL AND SPECIFIC DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED, BUT ARE OF SIMILAR CHARACTER TO THE DETAILS SHOWN, SIMILAR CONSTRUCTION SHALL BE USED SUBJECT TO REVIEW BY THE ARCHITECT. THE CONTRACTOR SHALL SUBMIT A WRITTEN CLARIFICATION WITH AN ACCURATE SKETCH DEPICTING THESE CONDITIONS AND OBTAIN A WRITTEN RESPONSE FROM THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK. THIS SHALL NOT CONSTITUTE A BASIS OF EXTRA WORK.
- CONTRACTOR SHALL NOT CUT OR DRILL THROUGH REINFORCING WHILE WORKING ON ANY EXISTING CONCRETE COLUMNS OR WALLS. CONTRACTOR SHALL LOCATE EXISTING REBAR PRIOR TO DRILLING, CORING, OR SAWCUTTING ANY CONCRETE ELEMENTS.
- DRAWINGS SHALL NOT BE SCALED TO DETERMINE DIMENSIONS.
- SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL FLOOR AND WALL OPENINGS, FLOOR FINISHES, ETC.
- SPECIAL NOTE: ARCHITECTURAL PLANS ARE CONSIDERED A PART OF THE STRUCTURAL DESIGN DRAWINGS AND ARE TO BE USED TO DEFINE DETAIL CONFIGURATION INCLUDING, BUT NOT LIMITED TO, RELATIVE LOCATION OF MEMBERS, ELEVATIONS, LOCATIONS OF ALL OPENINGS, DEPRESSIONS, SLOPES, JOINTS, DIMENSIONS, ETC.**
- DESIGN CRITERIA:**
  - BUILDING CODES  
IBC-2018 WITH STATE OF HAWAII AMENDMENTS

**STRUCTURAL ABBREVIATIONS**

APPROX.	APPROXIMATE	MIN.	MINIMUM
ARCH.	ARCHITECTURAL	MISC.	MISCELLANEOUS
BM.	BEAM	(N)	NEW
BOT., (B)	BOTTOM	N.T.S.	NOT TO SCALE
BTWN	BETWEEN	Ø	DIAMETER
C.J.	CONSTRUCTION JOINT	O.C., oc	ON CENTER
C.I.P.	CAST-IN-PLACE	O.H.	OPPOSITE HAND
CL.	CENTERLINE	OPG.	OPENING
CLR.	CLEAR(ANCE)	PL., R	PLATE
COL.	COLUMN	REINF.	REINFORCEMENT
CONC.	CONCRETE	REQ'D	REQUIRED
CONN.	CONNECTION	SCHED.	SCHEDULE
CONSTR.	CONSTRUCTION	SECT.	SECTION
CONT.	CONTINUOUS	SHT.	SHEET
DET.	DETAIL	SIM.	SIMILAR
DIM.	DIMENSION	SL.	SLOPE
DWG.	DRAWING	SQ.	SQUARE
(E), EXIST.	EXISTING	STD.	STANDARD
EA.	EACH	STIFF.	STIFFENER
EQ.	EQUAL	STRUCT.	STRUCTURAL
E.S.	EACH SIDE	(T)	TOP (REINFORCEMENT)
EXT., EXTER.	EXTERIOR	T&B	TOP & BOTTOM
FL., FLR.	FLOOR	THRU	THROUGH
FIN.	FINISH	T.O.S.	TOP OF SLAB
GALV.	GALVANIZED	TYP.	TYPICAL
(H), HORIZ.	HORIZONTAL	U.O.N.	UNLESS OTHERWISE NOTED
INFO	INFORMATION	VERT., (V)	VERTICAL
JT.	JOINT	V.I.F.	VERIFY IN FIELD
MAX.	MAXIMUM	W/	WITH
MECH.	MECHANICAL		

**CONCRETE**

- ALL CONCRETE IS REINFORCED AND CAST-IN-PLACE UNLESS OTHERWISE NOTED.
- ALL PHASES OF WORK PERTAINING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE 'BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318, WITH MODIFICATIONS AS NOTED IN THE CONTRACT DOCUMENTS.
- CONCRETE MIXING OPERATION, ETC., SHALL CONFORM TO C-94.
- PLACEMENT OF CONCRETE SHALL CONFORM TO ACI 304 AND CONTRACT DOCUMENTS.
- ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 5000 PSI WITH A MAXIMUM WATER CEMENT RATIO OF 0.4, U.O.N. FOUNDATION CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4000 PSI WITH A MAXIMUM WATER CEMENT RATIO OF 0.5
- PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE I OR TYPE II, LOW ALKALI.
- CONCRETE MIXES SHALL BE DESIGNED BY AN APPROVED LABORATORY. ADMIXTURES CONTAINING CALCIUM CHLORIDE ARE NOT ALLOWED.
- NORMAL WEIGHT CONCRETE AGGREGATES SHALL CONFORM TO ASTM C-33.
- NON-SHRINK CEMENT GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 7000 PSI. USE SIKA GROUT 212" OR "MASTERFLOW 928".
- THOROUGHLY CLEAN AND ROUGHEN ALL EXISTING CONCRETE, CONCRETE PREVIOUSLY POURED AND HARDENED AND MASONRY SURFACES TO RECEIVE NEW CONCRETE. INTERFACE SHALL BE ROUGHENED TO A FULL AMPLITUDE OF 1/4" UNLESS NOTED OTHERWISE.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT PLACED IN CAST-IN-PLACE CONCRETE:
  - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
  - FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:
    - #5 BAR, W31 OR D31 WIRE, AND SMALLER 1 1/2"
    - #6 THROUGH # 18 BARS 2"
  - CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
    - SLABS, WALLS AND JOISTS:
      - #14 AND #18 BARS 1 1/2"
      - #11 BAR AND SMALLER 1"
    - BEAMS, COLUMNS AND WALL JAMBS:
      - PRIMARY REINFORCEMENT, TIES, STIRRUPS, AND SPIRALS:
        - #3 THROUGH #11 1 1/2"
        - #14 AND #18 BARS 2 1/2"
- ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
- PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING IN CONCRETE IS NOT PERMITTED EXCEPT AS SHOWN. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS.
- PROJECTING CORNERS OF BEAMS, WALLS, COLUMNS, ETC., SHALL BE FORMED WITH A 3/4 IN. CHAMFER, UNLESS OTHERWISE NOTED ON ARCHITECTURAL DRAWINGS.
- CURING COMPOUNDS USED ON CONCRETE TO RECEIVE A FINISH SHALL BE APPROVED BY THE FINISH APPLICATOR BEFORE USE.
- ALL STRUCTURAL CONCRETE SHALL HAVE A MAXIMUM WATER-TO-CEMENTITIOUS MATERIALS RATIO OF 0.50
- COORDINATE SIZE OF ROUGH OPENINGS FOR WINDOWS AND DOORS IN CONCRETE WALLS WITH ARCHITECTURAL DRAWINGS.

**REINFORCING STEEL**

- ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN CONFORMANCE WITH THE 'BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE' (ACI 318) AND THE 'MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION' BY THE C.R.S.I. AND THE W.C.R.S.I., OR AS MODIFIED BY THE CONSTRUCTION DOCUMENTS.
- ALL NEW REINFORCING STEEL SHALL BE CHROMX 4100 W/ COATED TIE WIRE.
- WELDING OF REINFORCEMENT IS NOT PERMITTED DUE TO UNKNOWN PROPERTIES OF EXISTING REINFORCING.
- DRAWINGS SHOW TYPICAL REINFORCING CONDITIONS. CONTRACTOR SHALL PREPARE DETAILED PLACEMENT DRAWINGS OF ALL CONDITIONS SHOWING QUANTITY, SPACING, SIZE, CLEARANCES, LAPS, INTERSECTIONS AND COVERAGE REQUIRED BY STRUCTURAL DETAILS, APPLICABLE CODE AND TRADE STANDARDS. CONTRACTOR SHALL NOTIFY REINFORCING DEPUTY INSPECTOR OF ANY ADJUSTMENTS FROM TYPICAL CONDITIONS THAT ARE PROPOSED IN PLACEMENT DRAWINGS TO FACILITATE FIELD PLACEMENT OF REINFORCING STEEL AND CONCRETE.
- ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
- REINFORCING SPLICES SHALL ONLY BE MADE AS INDICATED ON THE DRAWINGS.
- DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING AS THE VERTICAL REINFORCING, RESPECTIVELY, UNLESS NOTED OTHERWISE.
- DOWELS BETWEEN SLABS AND WALLS OR COLUMNS SHALL BE THE SAME GRADE, SIZE AND SPACING AS THE VERTICAL REINFORCING, RESPECTIVELY, UNLESS NOTED OTHERWISE.
- ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.

**STRUCTURAL STEEL, METAL DECK, AND MISC. METAL**

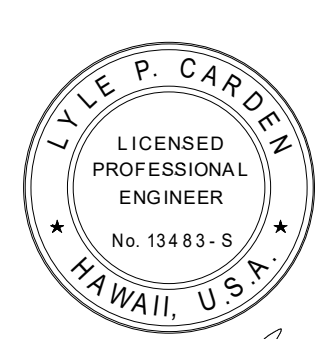

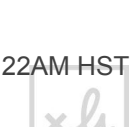
- ALL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
 

ALL WIDE FLANGE AND WT SHAPES	A992, GRADE 50
HSS (RECTANGULAR, SQUARE OR ROUND)	A500, GRADE B
STEEL PIPE (NOT LABELED AS HSS)	A53, GRADE B
ALL OTHER STRUCTURAL SECTIONS	A572, GRADE 50
BEAM SHEAR PLATES, STIFFENER PLATES ALL OTHER PLATES	A572, GRADE 50
HIGH STRENGTH BOLTS	F3125 GR. A325N
NUTS	A563
HARDENED WASHERS	F436
STAINLESS STEEL BOLTS NUTS AND WASHERS	F593, GRADE 316
- GENERAL CONTRACTOR TO DETERMINE SCOPE OF WORK FOR BOTH STRUCTURAL STEEL AND MISCELLANEOUS METAL SUBCONTRACTORS (IF MULTIPLE SUBCONTRACTORS ARE USED). THE COMBINED SCOPE OF WORK FOR ALL SUBCONTRACTORS SHALL INCLUDE ALL STRUCTURAL STEEL AND MISCELLANEOUS METAL WORK SHOWN ON THE CONTRACT DRAWINGS.
- STRUCTURAL STEEL SHALL CONFORM TO ASTM DESIGNATION AS INDICATED BELOW UNLESS NOTED OTHERWISE:
 

ALL WIDE FLANGE AND WT SHAPES	A992, GRADE 50
HSS (RECTANGULAR, SQUARE OR ROUND)	A500, GRADE B
STEEL PIPE (NOT LABELED AS HSS)	A53, GRADE B
ALL OTHER STRUCTURAL SECTIONS	A572, GRADE 50
BEAM SHEAR PLATES, STIFFENER PLATES ALL OTHER PLATES	A572, GRADE 50
HIGH STRENGTH BOLTS	F3125 GR. A325N
NUTS	A563
HARDENED WASHERS	F436
STAINLESS STEEL BOLTS NUTS AND WASHERS	F593, GRADE 316
- HIGH STRENGTH BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF AISC SPECIFICATIONS FOR STRUCTURAL JOINTS.
- HOT DIP GALVANIZE IN ACCORDANCE WITH ASTM A123 AND ASTM A153 STRUCTURAL STEEL, MISCELLANEOUS METAL AND FASTENERS THAT ARE EXPOSED TO THE WEATHER. REPAIR GALVANIZING AFTER WELDING IN ACCORDANCE WITH ASTM A780.
- WHEN FABRICATING BEAMS, PLACE NATURAL CAMBER UP. PROVIDE UPWARD CAMBER TO ALL MEMBERS SHOWN TO HAVE CAMBER. AMOUNT MEASURED IN THE FIELD PRIOR TO ERECTION SHALL NOT DEVIATE BY MORE THAN ALLOWED BY THE AISC SPECIFICATIONS.
- SPLICE MEMBERS ONLY WHERE INDICATED.
- THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS FOR THE ENGINEER'S REVIEW BEFORE FABRICATION. SUBMITTALS SHALL BE IN SIZES COMMENSURATE WITH A TWO WEEK TURNAROUND TIME. A MAXIMUM OF 250 SHOP DRAWINGS EVERY TWO WEEKS IS PERMITTED UNLESS WRITTEN AUTHORIZATION IS PROVIDED BY THE ARCHITECT TO CHANGE THIS LIMIT.
- AFTER FABRICATION, ALL STEEL SHALL BE CLEANED FREE OF RUST, LOOSE MILL SCALE AND OIL.
- BOLT HOLES IN STEEL SHALL BE STANDARD HOLES, 1/16 INCH LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT USED, UNLESS NOTED OTHERWISE. BOLT HOLES IN BASE PLATES MAY BE OVERSIZED PER AISC TABLE 14-2 IF WASHERS ARE PROVIDED IN ACCORDANCE WITH THIS TABLE.
- BOLTS SHALL BE SPACED AT 3" O.C. UNLESS NOTED OTHERWISE. THE DISTANCE FROM THE EDGE OF A STANDARDS HOLE TO THE EDGE OF A CONNECTING PART IN ANY DIRECTION SHALL NOT BE LESS THAN 1 1/2" U.N.O. THE EDGE DISTANCE MAYBE 1 1/4" AT THE ENDS OF BEAM CONNECTION ANGLES AND SHEAR END PLATES. THE DISTANCE FROM CENTER OF AN OVERSIZED OR SLOTTED HOLE TO THE EDGE OF A CONNECTING PART SHALL NOT BE LESS THAN THAT REQUIRED FOR A STANDARD HOLE TO THE EDGE OF A CONNECTED PART PLUS THE APPLICABLE INCREMENT C/2 FROM AISC TABLE J3.5.
- ALL STRUCTURAL STEEL SURFACES TO BE WELDED OR HIGH-STRENGTH BOLTED, TO BE ENCASED IN CONCRETE OR TO RECEIVE SPRAY-APPLIED FIREPROOFING SHALL BE LEFT UNPAINTED.

**STEEL WELDING**

- ALL WELDING SHALL BE IN STRICT CONFORMANCE WITH THE LATEST EDITION OF AWS D1.1. ALL WELDED JOINTS SHALL BE PRE-QUALIFIED PER THE LATEST EDITION OF AWS D1.1. ALL NON PRE- QUALIFIED WELDED JOINTS SHALL BE QUALIFIED BY TEST & PROCEDURE QUALIFICATION TEST RECORD INCLUDED PER THE LATEST EDITION OF AWS D1.1.
- WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WELD SIZE SHALL BE AISC MINIMUM UNLESS A LARGER SIZE IS NOTED. WHERE LENGTH OF WELD IS NOT SHOWN IT SHALL BE FULL LENGTH OF JOINT. ALL BUTT AND GROOVE WELDS SHALL BE FULL PENETRATION, UNLESS NOTED OTHERWISE.
- ALL WELDING ELECTRODES AND ELECTRODE FLUX COMBINATIONS (FILLER METAL) SHALL BEE 7XTX, E7XTXX OR E70XXX (MINIMUM 70 KSI), UNLESS NOTED OTHERWISE, AND SHALL MEET THE REQUIREMENTS FOR H16 PER AISC SEISMIC PROVISIONS.
- SALL WELDS SHALL HAVE A FILLER METAL WITH CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS AVERAGE AT MINUS TWENTY DEGREES FAHRENHEIT AND 40FT-LBS AT SEVENTY DEGREES FAHRENHEIT. CERTIFY CONFORMANCE TO CHARPY V-NOTCH TOUGHNESS REQUIREMENTS WITH TESTS BY AN INDEPENDENT TESTING LABORATORY.
- WHERE WELDING IS NOTED, THE DESIGNATION IS GIVEN AS A SUGGESTED CONSTRUCTION PROCEDURE ONLY. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR IDENTIFYING THE METHOD OF FABRICATION.
- ALL SHOP WELDS SHALL BE PERFORMED BY A FABRICATOR LICENSED BY THE LOCAL JURISDICTION.
- ALL WELDERS SHALL BE QUALIFIED FOR THE WORK THEY WILL BE PERFORMING AND SHALL HAVE CURRENT VALID CERTIFICATIONS ISSUED BY AWS AND THE GOVERNING JURISDICTION.
- FACES OF FILLET WELDS EXPOSED TO VIEW SHALL HAVE AS-WELDED SURFACES THAT ARE REASONABLY SMOOTH AND UNIFORM. NO FINISHING OR GRINDING SHALL BE REQUIRED, EXCEPT WHERE CLEARANCES OR FIT OF OTHER ITEMS MAY SO NECESSITATE.
- CLEAN GROOVE PREPARATION THERMAL CUTS BY GRINDING.
- WELDS SHALL BE TERMINATED AT THE END OF A JOINT IN A MANNER THAT WILL ENSURE SOUND WELDS. WHENEVER NECESSARY THIS SHALL BE DONE BY USE OF EXTENSION BARS AND RUN OFF TABS.
- A WRITTEN "WELDING PROCEDURE SPECIFICATION" (WPS), PER AWS D1.1, SHALL BE DEVELOPED BY THE FABRICATOR/ERECTOR, AND REVIEWED BY THE ENGINEER. THE WPS SHALL CONTAIN ALL THE NECESSARY INFORMATION REQUIRED BY THE CODE, THE SPECIFICATIONS, AND ANY OTHER INFORMATION NECESSARY TO PRODUCE WELDS THAT ARE IN COMPLIANCE WITH THESE REQUIREMENTS. THE WPS SHALL INCLUDE THE WELDING PARAMETERS RECOMMENDED BY THE ELECTRODE MANUFACTURER. ALL WELDERS AND INSPECTORS SHALL ADHERE TO THE WPS AND SHALL RETAIN A COPY.

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
		STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION <b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006			
<b>GENERAL NOTES</b>					
DESIGNED: LC					
DRAWN: MCC	SUBMITTED: BID SUBMITTAL		DL		
CHECKED: LC	DATE: 04/13/2026				
APPROVED: LC	SCALE: As indicated				
EXPIRES: 4/30/2026 		Dina Lau E-signed 2026-04-17 08:22AM HST dina.u.lau@hawaii.gov State of Hawaii Chief Engineer			
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION					

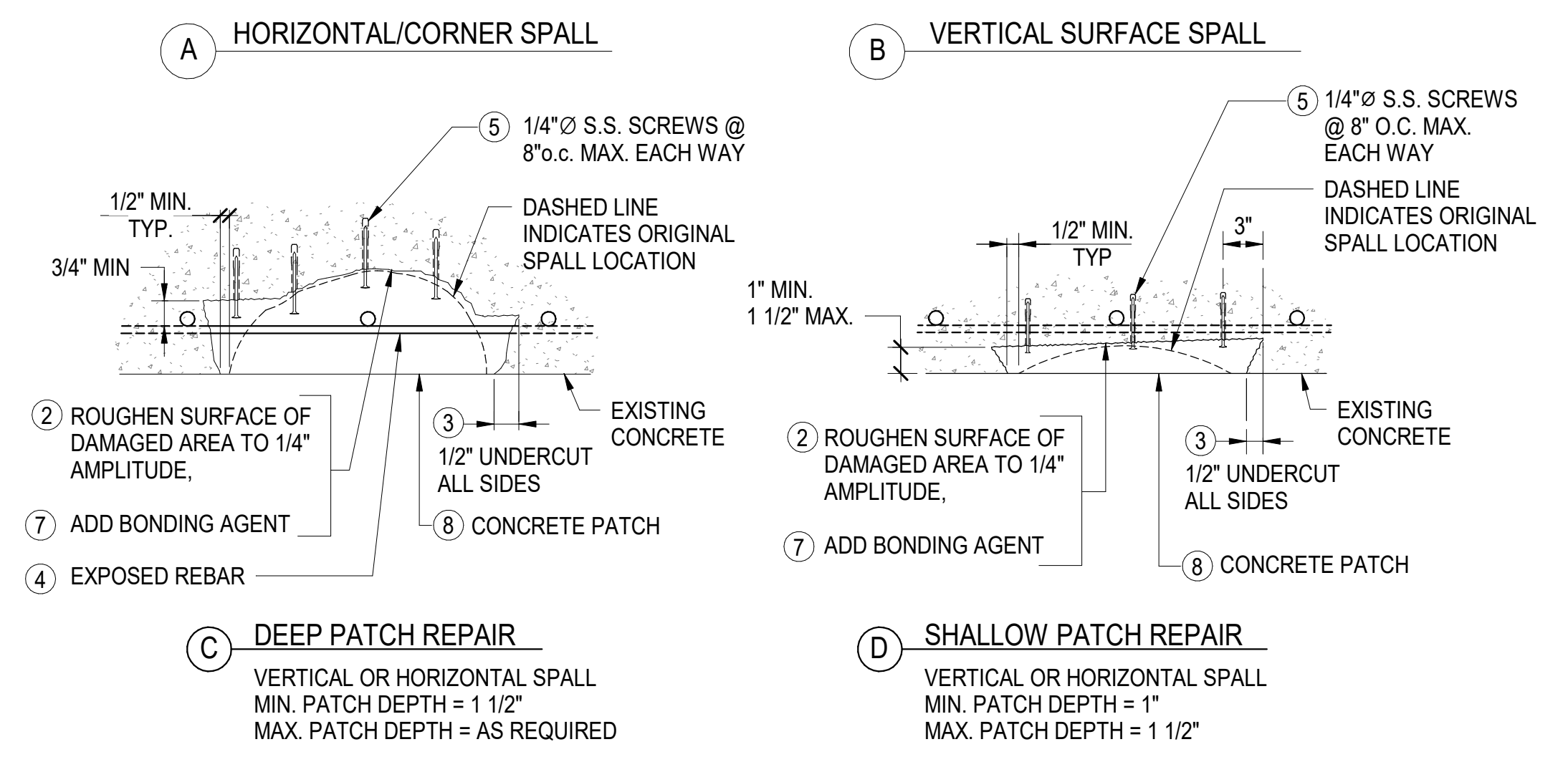
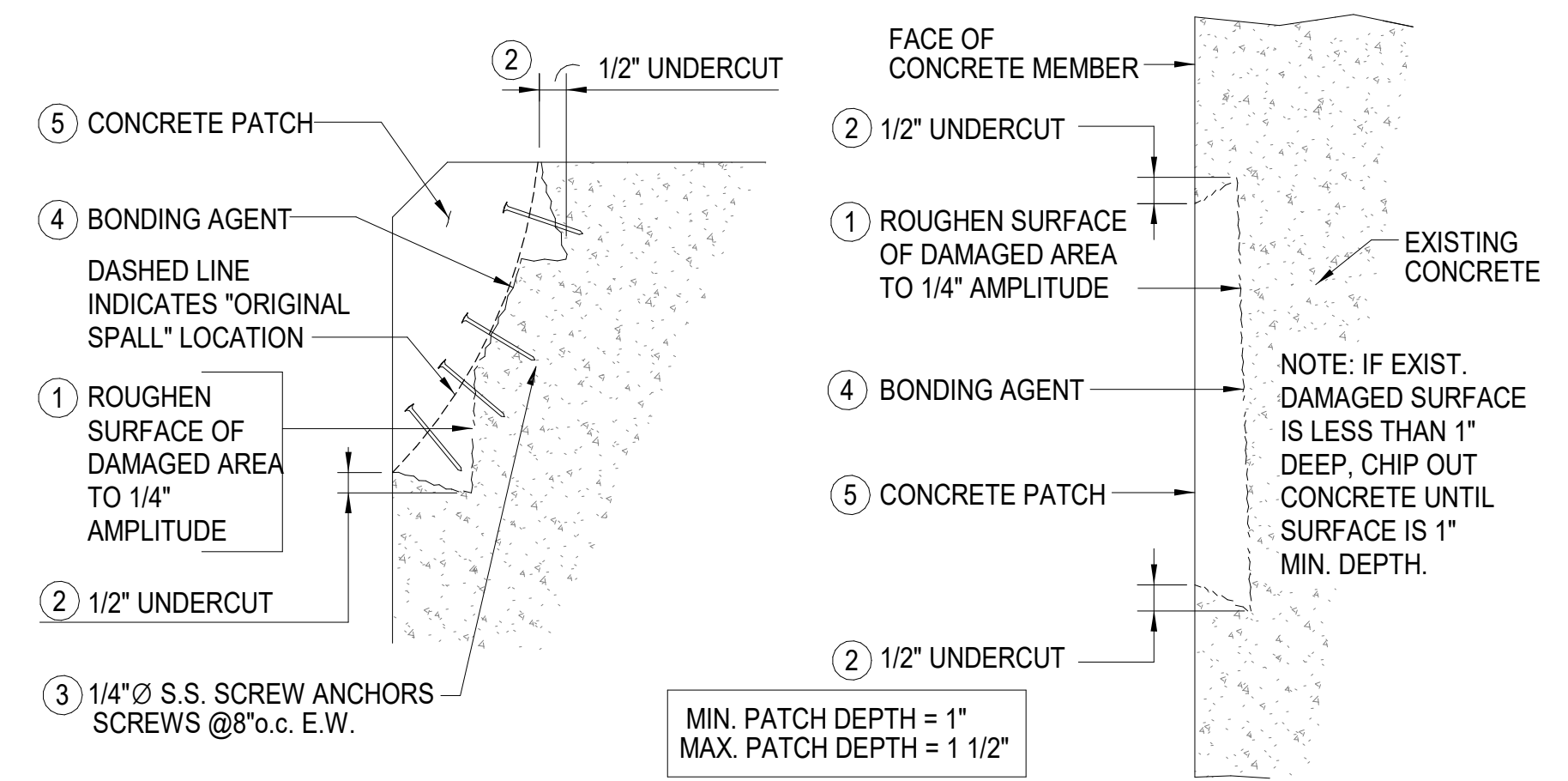
**CONCRETE REPAIR NOTES**

- ALL CONCRETE UNLESS OTHERWISE NOTED SHALL BE REGULAR WEIGHT HARD ROCK TYPE (150#/CU.FT.).
- PORTLAND CEMENT SHALL CONFORM TO ASTM C-150 TYPE II.
- AGGREGATE FOR HARD ROCK CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C-33 AND PROJECT SPECIFICATIONS.
- CONCRETE MIXING OPERATION, ETC. SHALL CONFORM TO ASTM C-94.
- PLACEMENT OF CONCRETE SHALL CONFORM TO ACI STANDARD 301 AND PROJECT SPECIFICATIONS.
- CONCRETE ADMIXTURES CONTAINING CHLORIDE OR CHLORIDE SALTS SHALL NOT BE USED.
- ALL REPAIRS SHALL REESTABLISH ADEQUATE CLEAR COVER TO REINFORCING STEEL. EXISTING STEEL WITHOUT ADEQUATE COVER SHALL BE EXCAVATED UNTIL ADEQUATE COVER IS ACHIEVED.
- PRIOR TO PLACEMENT OF PATCH MATERIAL, THE EXPOSED CONCRETE SHALL BE SATURATED SURFACE DRY WITH NO WATER ACCUMULATION.
- THE SURFACE FINISH SHALL MATCH ADJACENT CONDITIONS.
- FORMS SHALL BE REMOVED AFTER FIVE DAYS OF CURING. PATCHES SHALL BE INSPECTED FOR IMPROPER CONSOLIDATION OR CRACKING AROUND THE PERIMETER OR IN THE PATCH. IF THESE CONDITIONS EXIST, NOTIFY THE ENGINEER FOR POSSIBLE REMEDIAL ACTION.
- CONCRETE WORK SHALL CONFORM TO THE FOLLOWING CODES AND STANDARDS:
  - ACI 301 "SPECIFICATION FOR STRUCTURAL CONCRETE IN BUILDINGS"
  - ACI 304 "GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE"
  - ACI 304.2 "PLACING CONCRETE BY PUMPING METHODS"
  - ACI 305 "HOT WEATHER CONCRETING"
  - ACI 309 "STANDARD PRACTICE FOR CONSOLIDATION OF CONCRETE"
  - ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCING"
  - ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
  - ACI 347 "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK"
- MINIMUM CONCRETE COVER OF REINFORCING STEEL FOR "PATCHES," REPAIRS, ETC., SHALL BE 1" UNLESS OTHERWISE NOTED ON DRAWINGS.
- EXCAVATE ALL LOOSE FRACTURED CONCRETE AROUND SPALL. IN GENERAL, EXTEND LIMITS OF EXCAVATION UNTIL SOUND CONCRETE IS ENCOUNTERED OR AS SHOWN ON THE DRAWINGS. LIMIT CHIPPING GUN TO 15 LB.
- CLEAN ALL EXISTING REBAR OF ALL LOOSE RUST BY SANDBLAST OR NEEDLE GUN.
- ROUGHEN SURFACE TO 1/4" AMPLITUDE AT ALL INTERFACE CONTACT WITH EXISTING CONCRETE SUBSTRATE. PROVIDE UNDERCUT AT PERIMETER OF CONCRETE PATCH AS SHOWN ON DETAILS.
- CLEAN ALL EXCAVATED CONCRETE SURFACES OF DEBRIS, DUST, GREASE, OIL, ETC.
- IN GENERAL, THE FOLLOWING APPLIES TO REPLACING/SUPPLEMENTING CORRODED REBAR:
  - IF CROSS SECTIONAL LOSS OF BAR IS LESS THAN 10% AFTER REMOVING ALL CORROSION PRODUCT, THE BAR DOES NOT REQUIRE REPLACEMENT/SUPPLEMENT.
  - IF CROSS SECTIONAL LOSS OF BAR IS 10% TO 20% AFTER REMOVING ALL CORROSION PRODUCT, CONTACT ENGINEER FOR EVALUATION AND DIRECTION.
  - IF CROSS SECTIONAL LOSS OF BAR IS GREATER THAN 20% AFTER REMOVING ALL CORROSION PRODUCT, REPLACE OR SUPPLEMENT WITH SPLICED BARS.
- ALL REPLACEMENT REINFORCING STEEL SHALL CONFORM TO ASTM A706 GRADE 60 UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- ANCHOR BOLTS, DOWELS AND OTHER EMBEDDED ITEMS ARE TO BE SECURELY TIED IN PLACE BEFORE CONCRETE IS POURED.
- ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
- ALL REPLACEMENT REINFORCING STEEL SHALL BE LAP SPLICED PER DETAILS SHOWN ON THE DRAWINGS. SPLICES SHALL BE LOCATED AS DETAILED. WHERE LAP OR SPlice LOCATIONS ARE NOT SPECIFICALLY INDICATED, SPLICES SHALL BE STAGGERED.
- IN GENERAL, CONCRETE REPAIRS AND RELATED WORK SHALL CONFORM TO THE FOLLOWING ICRI (INTERNATIONAL CONCRETE REPAIR INSTITUTE) TECHNICAL GUIDELINES, UNLESS OTHERWISE INDICATED ON THE DRAWINGS:
  - GUIDELINE NO. 03730 "GUIDELINE FOR SURFACE PREPARATION FOR THE REPAIR OF DETERIORATED CONCRETE RESULTING FROM REINFORCING STEEL CORROSION" (1995)
  - GUIDELINE NO. 03731 "GUIDE FOR SELECTING APPLICATION METHODS FOR THE REPAIR OF CONCRETE SURFACES" (1996)
  - GUIDELINE NO. 03733 "GUIDE FOR SELECTING AND SPECIFYING MATERIALS FOR REPAIR OF CONCRETE SURFACES" (1997)
- PRODUCT MANUFACTURERS' REPRESENTATIVES SHALL BE PRESENT AT THE JOB SITE TO SUPERVISE AND INSPECT ALL SAMPLE/PROTOTYPE REPAIRS, AND SHALL PERIODICALLY VISIT THE JOB SITE TO INSPECT REPAIRS FOR CORRECT PRODUCT USAGE.
- CONTRACTOR SHALL SUBMIT DESIGNS FOR ALL CONCRETE MIXES AS REQUIRED BY THE PROJECT SPECIFICATIONS.
- WHERE REINFORCING STEEL IS TO BE ADDED, IT SHALL BE LAP SPLICED FOR A LENGTH OF 48 BAR DIAMETERS. IN LIEU OF LAPPED REBAR, NEW REINFORCING MAY BE CONNECTED TO EXISTING REINFORCING WITH A MECHANICAL COUPLER. SEE TYPICAL DETAIL A3 / THIS SHEET.

**SUMMARY OF ACCEPTABLE CONCRETE REPAIR PRODUCTS**

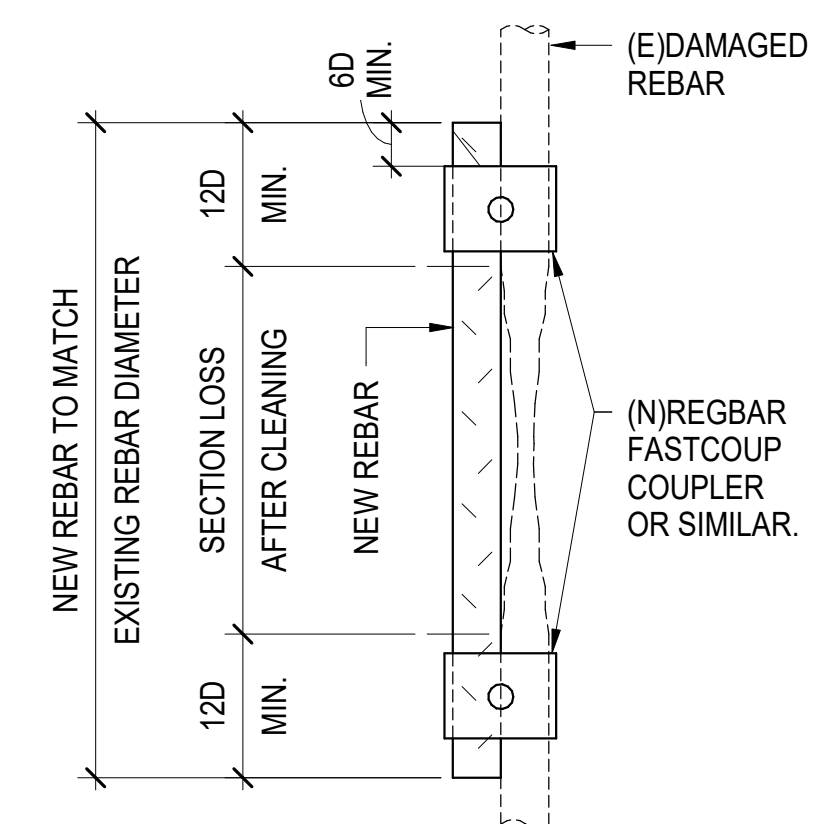
- THE CONTRACTOR SHALL VERIFY WITH THE MATERIAL SUPPLIERS, THE COMPATIBILITY OF ALL PRODUCTS AND PROCEDURES UTILIZED FOR REPAIRS, BEFORE START OF WORK. IF ANY MODIFICATIONS NEED TO BE MADE, THEY SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER PRIOR TO THE START OF ANY WORK.
- THE FOLLOWING ARE ACCEPTABLE ALTERNATIVES UTILIZED IN THE REPAIR DETAILS.

PRODUCT DESCRIPTION	ACCEPTABLE ALTERNATIVE PRODUCTS
A. CEMENTITIOUS MATERIAL FOR HORIZONTAL (TOP) SHALLOW PATCH REPAIRS	<ul style="list-style-type: none"> <li>SIKAQUICK 1000</li> <li>EMACO T430, BASF.</li> <li>MASTERFLOW 713, BASF.</li> <li>QUIKRETE FAST SET REPAIR MORTAR (NO. 1241)</li> <li>THORITE GENERAL PURPOSE CONCRETE RESTORATION, BASF</li> </ul>
B. CEMENTITIOUS MATERIAL FOR OVERHEAD & VERTICAL SHALLOW PATCH REPAIRS	<ul style="list-style-type: none"> <li>SIKAREPAIR 223, SIKA CORPORATION</li> <li>THORITE RAPID VERTICAL, THORO SYSTEMS</li> <li>SONNEBORN SONOPATCH 200</li> <li>EUOCO VERTICOAT, EUCLID CHEMICAL COMPANY</li> </ul>
C. POLYMER MODIFIED CAST-IN-PLACE CONCRETE FOR ALL DEEP PATCH REPAIRS AND NEW CONCRETE ELEMENTS WITHOUT ZINC ANODES	<ul style="list-style-type: none"> <li>CONCRETE PROPERTIES:                             <ul style="list-style-type: none"> <li>28-DAY STRENGTH = 5000 PSI</li> <li>MAX. WATER TO CEMENT RATIO = 0.50</li> <li>3/8" DIAMETER PEA GRAVEL</li> <li>CALCIUM NITRITE ADMIXTURE</li> <li>HIGH RANGE WATER REDUCER (MAX. 6-1/2" SLUMP)</li> <li>SHRINKAGE COMPENSATING ADMIXTURE</li> <li>LATEX (POLYMER) ADMIXTURE MUST BE INCLUDED. SEE MANUFACTURER FOR PROPORTIONS OF EITHER DILUTED OR UN-DILUTED MIX</li> <li>FIBER REINF. - FORTO FERRO @ 7.5 lb/cy WHERE NOT CONVENTIONALLY REINFORCED OR OTHERWISE NOTED</li> </ul> </li> <li><b>NOTE:</b> PRE-MIXED BAGGED CONCRETE SUCH AS QUIKRETE (5000 PSI) MIX OR SIKAGROUT 212 WITH PEA GRAVEL (25#/55# BAG OF DRY MIX BUT NOT EXCEEDING 25% BY VOLUME) MAY BE USED W/ THE ABOVE ADMIXTURES.</li> </ul>
D. SHRINKAGE REDUCING ADMIXTURE	<ul style="list-style-type: none"> <li>GRACE ECLIPSE, 2% BY WEIGHT OF CEMENT; 1.5 GALS. PER YD.</li> <li>SIKA CONTROL 40, 30 FL. OZ. PER 100 LB. OF CEMENT.</li> <li>BASF MASTERLIFE SRA 20, 1.5 GALS. PER YD.</li> </ul>
E. STEEL ANCHORS	<ul style="list-style-type: none"> <li>1/4"Ø S.S. REDHEAD TAPCON IN 1 1/4" DEEP HOLE DRILLED WITH MATCHING DRILL BIT (TYPE 316 OR 410 S.S.)</li> <li>1/4"Ø S.S. SIMPSON TITEN HD IN 1 1/4" DEEP HOLE DRILLED WITH MATCHING DRILL BIT (TYPE 316 OR 410 S.S.)</li> </ul>
F. BONDING AGENT	<ul style="list-style-type: none"> <li>SIKA ARMATEC 110</li> <li>THORO ACRYL 60</li> <li>QUIKRETE BONDING ADHESIVE</li> </ul>
G. JOINT SEALER	<ul style="list-style-type: none"> <li>SIKAFLEX - 15 LM, SIKA CORP.</li> <li>SONNEBORN NP1, CHEMREX</li> </ul>
H. EPOXY PASTE TO SEAL CRACKS AROUND PORTS FOR PRESSURE INJECTION OF EPOXY RESIN	<ul style="list-style-type: none"> <li>SIKADUR 31 HI-MOD GEL, SIKA CORP.</li> <li>SONNEBORN EPOGEL, CHEMREX</li> <li>DENEPOX GEL 50, DE NEEF</li> </ul>
I. EPOXY RESIN FOR PRESSURE INJECTION OF CRACKS (PRESSURE GROUTING EPOXY)	<ul style="list-style-type: none"> <li>SIKADUR 35 HI-MOD LV LPL, SIKA CORP.</li> <li>SONNEBORN EPOFIL, CHEMREX</li> <li>DENEPOX I-150, DE NEEF</li> </ul>
J. NON-SHRINK GROUT	<ul style="list-style-type: none"> <li>SIKA GROUT 212, SIKA CORP.</li> <li>MASTERFLOW 928, MASTER BUILDERS</li> <li>SIKADUR 31 HI-MOD GEL, SIKA CORP.</li> </ul>
K. ADHESIVE TO FOR POST-INSTALLED REINFORCING DOWELS	<ul style="list-style-type: none"> <li>HILTI HIT-RE 500-V3 EPOXY ADHESIVE</li> <li>SIMPSON SET-XP EPOXY-TIE ADHESIVE</li> <li>DEWALT PURE 110+</li> </ul>
L. POLYURETHANE FOR CRACK INJECTION	<ul style="list-style-type: none"> <li>SEE PROJECT SPECIFICATIONS.</li> </ul>



- REPAIR PROCEDURE**
- CHIP OUT ALL LOOSE AND FRACTURED CONCRETE AROUND SPALL. EXTEND LIMITS OF EXCAVATION UNTIL SOUND CONCRETE IS ENCOUNTERED.
  - ROUGHEN SURFACE TO 1/4" MINIMUM AMPLITUDE.
  - CREATE 1/2" UNDERCUTS CUT AT PERIMETER.
  - CLEAN ALL EXPOSED REBAR TO BRIGHT STEEL CONDITION. REPLACE CORRODED BARS WHICH HAVE LOST MORE THAN 20% OF CROSS-SECTION AND / OR AS DIRECTED BY THE ENGINEER (SEE DETAIL A3/S-002 & CONC. REPAIR NOTES).
  - INSTALL 1/4"Ø S.S. SCREWS @ 8" O.C. MAX. EACH WAY. SEE ITEM "E" ON TABLE OF ACCEPTABLE CONCRETE REPAIR PRODUCTS ON SHEET S-001. PROVIDE 1 1/4" MIN. EMBEDMENT INTO SOUND CONCRETE. PROVIDE 3/4" MIN. CLEAR COVER TO HEAD OF SCREW AFTER PATCH INSTALLATION.
  - PROVIDE SHADE ABOVE WORK AREA OF PATCHES IF CONCRETE MEMBER IS EXPOSED TO DIRECT SUNLIGHT DURING CURING.
  - APPLY BONDING AGENT TO CONCRETE SURFACE. SEE ITEM "F" ON THE TABLE OF ACCEPTABLE CONCRETE REPAIR PRODUCTS ON SHEET S-001
  - INSTALL PATCH MATERIAL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. SEE ITEMS "A" THROUGH "C" ON THE TABLE OF ACCEPTABLE CONCRETE REPAIR PRODUCTS ON SHEET S-001.
  - FINISH AND CURE AS REQUIRED.

**B4 TYPICAL CONCRETE REPAIR DETAIL AT SLABS, BEAMS, WALLS, AND COLUMNS**  
SCALE: NO SCALE



- SEE CONCRETE REPAIR NOTES 14, 17, 21, & 25 FOR GENERAL REPLACEMENT/SUPPLEMENT OF (E) REINFORCING.
- NEW REBAR FOR SPlice SHALL BE ASTM A706, GRADE 60.
- COUPLER SHALL BE RATED FOR 125% OF TENSION YIELD STRENGTH OF REINFORCING BAR.
- ENSURE MINIMUM COVER TO BARS AND COUPLER.

**A3 TYPICAL REINFORCING LAP SPlice REPAIR**  
SCALE: NOT TO SCALE

REVISION NO.	SYM.	DESCRIPTION	SH. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION <b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006 <b>TYPICAL REPAIR DETAILS</b>					
DESIGNED: LC					
DRAWN: MCC	SUBMITTED: BID SUBMITTAL		GC	DL	
CHECKED: LC	DATE: 04/13/2026				
APPROVED: GC	SCALE: As indicated				
		Dina Lau E-signed 2026-04-17 08:22AM HST dina.u.lau@hawaii.gov State of Hawaii Civil Engineer			
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION		<b>S-002</b>			

**INSPECTION / TESTING**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SPECIAL INSPECTIONS BY HIRING AN INDEPENDENT THIRD PARTY TO PERFORM ALL INSPECTIONS AS REQUIRED BY THE BUILDING CODE AT THE APPROPRIATE TIME AT NO ADDITIONAL COST TO THE STATE. FREQUENCY OF INSPECTIONS IS DEFINED IN THE IBC, SECTION 1704 TABLES, AS AMENDED BY THE COUNTY. THE CONTRACTOR SHALL CORRECT DEFECTIVE WORK AT NO ADDITIONAL COST TO THE STATE AND PAY FOR RE-INSPECTION AS REQUIRED.
2. PROVIDE CONTINUOUS OR PERIODIC SPECIAL INSPECTION FOR ITEMS NOTED IN "TEST AND INSPECTION LIST", AS REQUIRED PER THE CHAPTER 17 OF THE IBC AND ALL APPLICABLE AMENDMENTS:
3. SPECIAL INSPECTIONS MAY NOT BE REQUIRED WHEN THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED BY THE ENGINEER OR GOVERNING AGENCY HAVING JURISDICTION OVER THE PROJECT TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION.
4. TEST BY CALIBRATED TORQUE WRENCH A MINIMUM OF 10% OF HIGH STRENGTH BOLTS (MINIMUM ONE (1) BOLT) AT EACH SHEAR CONNECTION.
5. APPROVAL BY THE INSPECTOR OF MATTERS NOT SPECIFICALLY CONSTRUCTED PER THE APPROVED DRAWINGS DOES NOT MEAN THE FAILURE TO COMPLY WITH THE CONSTRUCTION DOCUMENTS HAS BEEN ACCEPTED. ANY DETAIL THAT FAILS TO BE CLEAR OR IS AMBIGUOUS MUST BE REFERRED TO THE STRUCTURAL ENGINEER FOR INTERPRETATION OR CLARIFICATION.
6. INSPECTION AND TESTING REPORTS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER WITHIN SEVEN DAYS OF WHEN THE INSPECTION WAS MADE OR WHEN THE TESTING WAS PERFORMED.
7. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY INSPECTION OR TESTING WHICH DOES NOT COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

**STRUCTURAL OBSERVATION**

1. PERIODIC STRUCTURAL OBSERVATION WILL BE PROVIDED BY MARTIN, CHOCK & CARDEN INC., STRUCTURAL ENGINEERS, PER THE HAWAII STATE BUILDING CODE FOR THE WORK INDICATED BELOW. CONTRACTOR SHALL NOTIFY ENGINEER 48 HOURS BEFORE REQUIRED OBSERVATIONS. DELINQUENT NOTIFICATION MAY REQUIRE DEMOLITION OF COVERING MATERIAL TO FACILITATE OBSERVATION.  
 PLACING OF CONCRETE  
 PLACING OF REINFORCING  
 PLACING OF STRUCTURAL STEEL  
 PLACING OF ANCHOR BOLTS  
 PLACING OF MECHANICAL AND ADHESIVE ANCHORS
2. STRUCTURAL OBSERVATIONS PERFORMED BY MARTIN, CHOCK & CARDEN CONSIST ON THE VISUAL OBSERVATION OF THE MAJOR ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND THE COMPLETED STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE REQUIREMENT/ RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE BUILDING INSPECTOR OR THE SPECIAL INSPECTOR.

**TEST AND INSPECTION LIST**

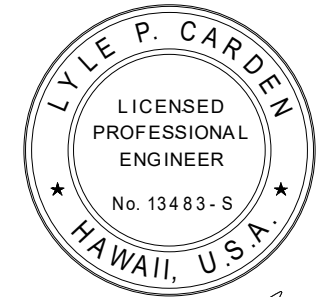
STRUCTURAL STEEL					
X	REVIEW MILL CERTIFICATE, TEST REPORTS AND MATERIAL IDENTIFICATION DELIVERED TO THE SITE				
X	REVIEW WELDING PROCEDURE SPECIFICATION & WELDER CERTIFICATION				
P	INSTALLATION OF NON-SLIP CRITICAL HIGH-STRENGTH BOLTS & WASHERS (PROVIDE CONTINUOUS INSPECTION IF INSTALLATION IS PERFORMED WITH CALIBRATED WRENCH)				
P	FIELD ERECTION INSPECTION				
X	FABRICATION INSPECTION	P	SHOP	P	FIELD
X	WELDING INSPECTION	P	SHOP	P	FIELD
X	BOLTING INSPECTION	P	SHOP	P	FIELD
-	INSTALLATION OF ANCHOR BOLTS BEFORE & DURING CONCRETE POUR				

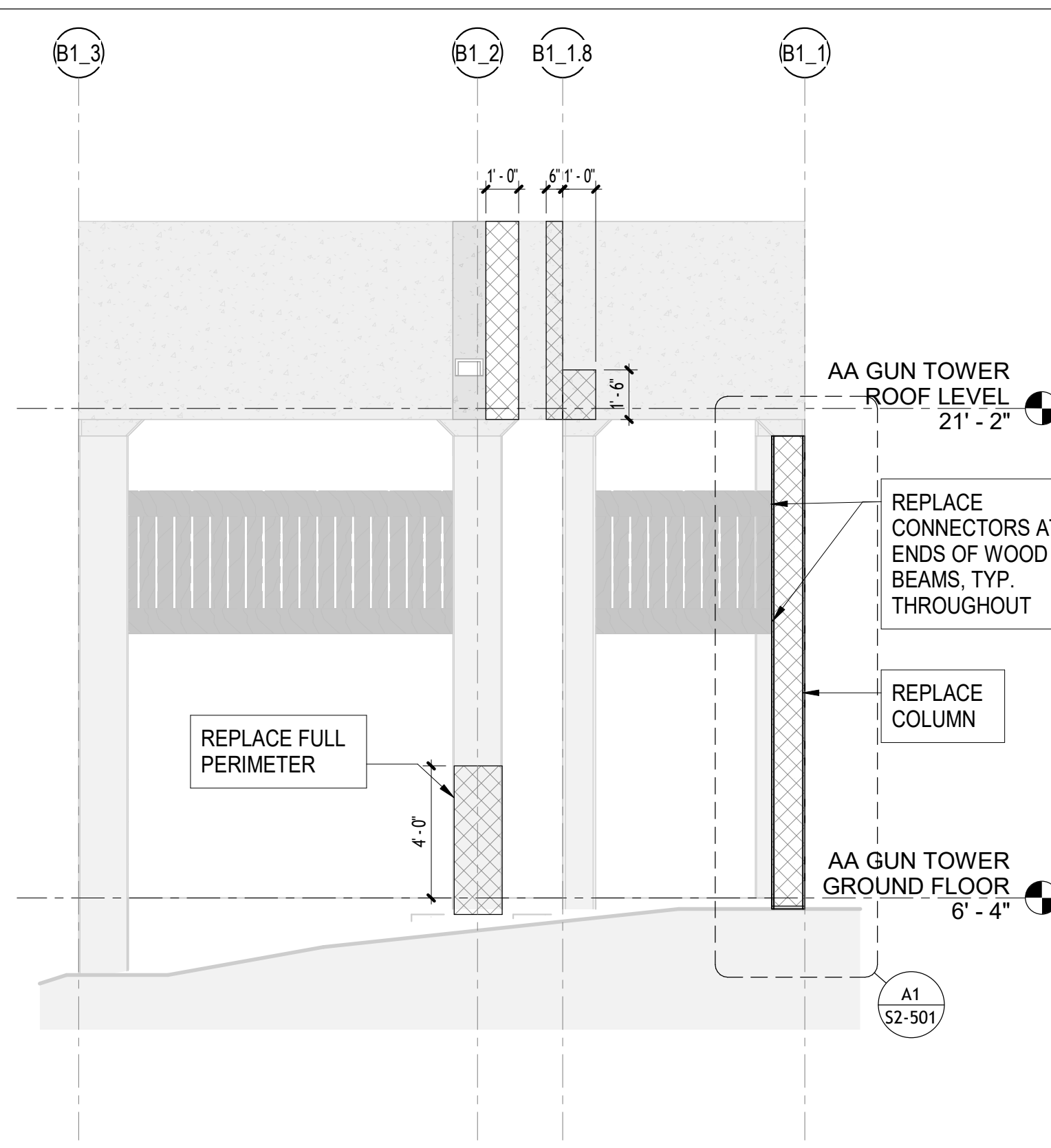
REINFORCING STEEL					
X	REVIEW MILL CERTIFICATES & TEST REPORTS				
X	SAMPLE & TEST	X	REINFORCING BARS		WELDED WIRE FABRIC
P	PLACEMENT INSPECTION				
C	WELDING INSPECTION				
P	TEST REINFORCING FOR WELDABILITY OTHER THAN ASTM A706				

CONCRETE, SHOTCRETE, CMU, GROUT & MORTAR					
CONCRETE	SHOTCRETE	CMU	GROUT	MORTAR	
X					MIX DESIGN REVIEW
X					VERIFICATION OF CORRECT MIX DESIGN USED DURING POUR
					PREPARATION OF SAMPLES FOR TESTING PURPOSES
X					BATCH PLANT INSPECTIONS
C					CAST, PICK-UP, AND COMPRESSION TEST SAMPLES
C					SLUMP, ENTRAINED AIR, & TEMPERATURE TEST
X					SHRINKAGE TEST
C					PLACEMENT INSPECTION
P					CURING TEMPERATURE AND TECHNIQUES
P					FORMWORK INSPECTION

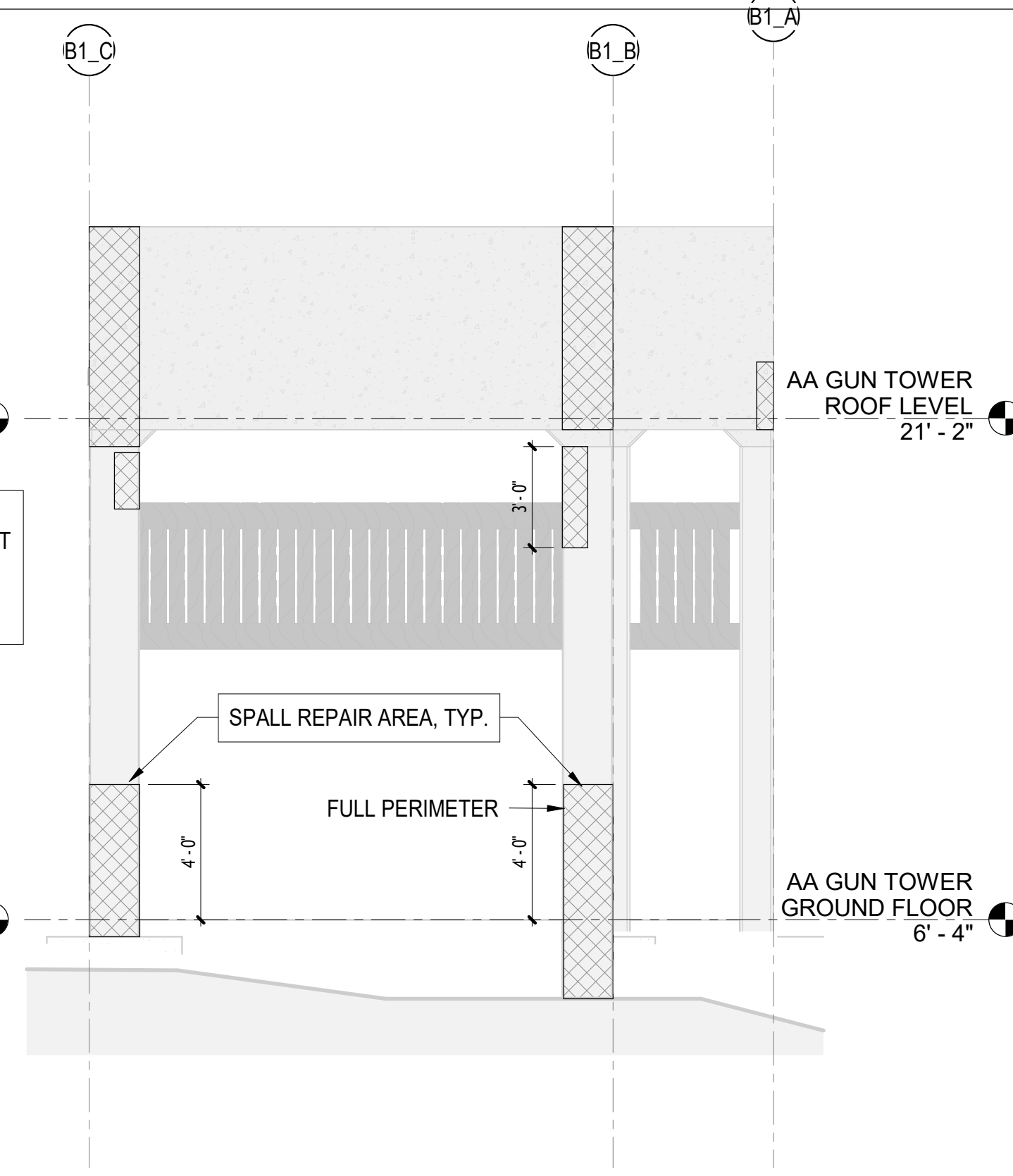
MISCELLANEOUS	
C	MECHANICAL ANCHORS
C	ADHESIVE OR GROUTED ANCHORS AND DOWELS
-	BOLTS CAST IN CONCRETE OR MASONRY

**NOTES:**  
 C: INDICATES CONTINUOUS INSPECTION  
 P: INDICATES PERIODIC INSPECTION  
 X: INDICATES REQUIRED INSPECTION  
 - OR BLANK: SPECIAL INSPECTION NOT ANTICIPATED

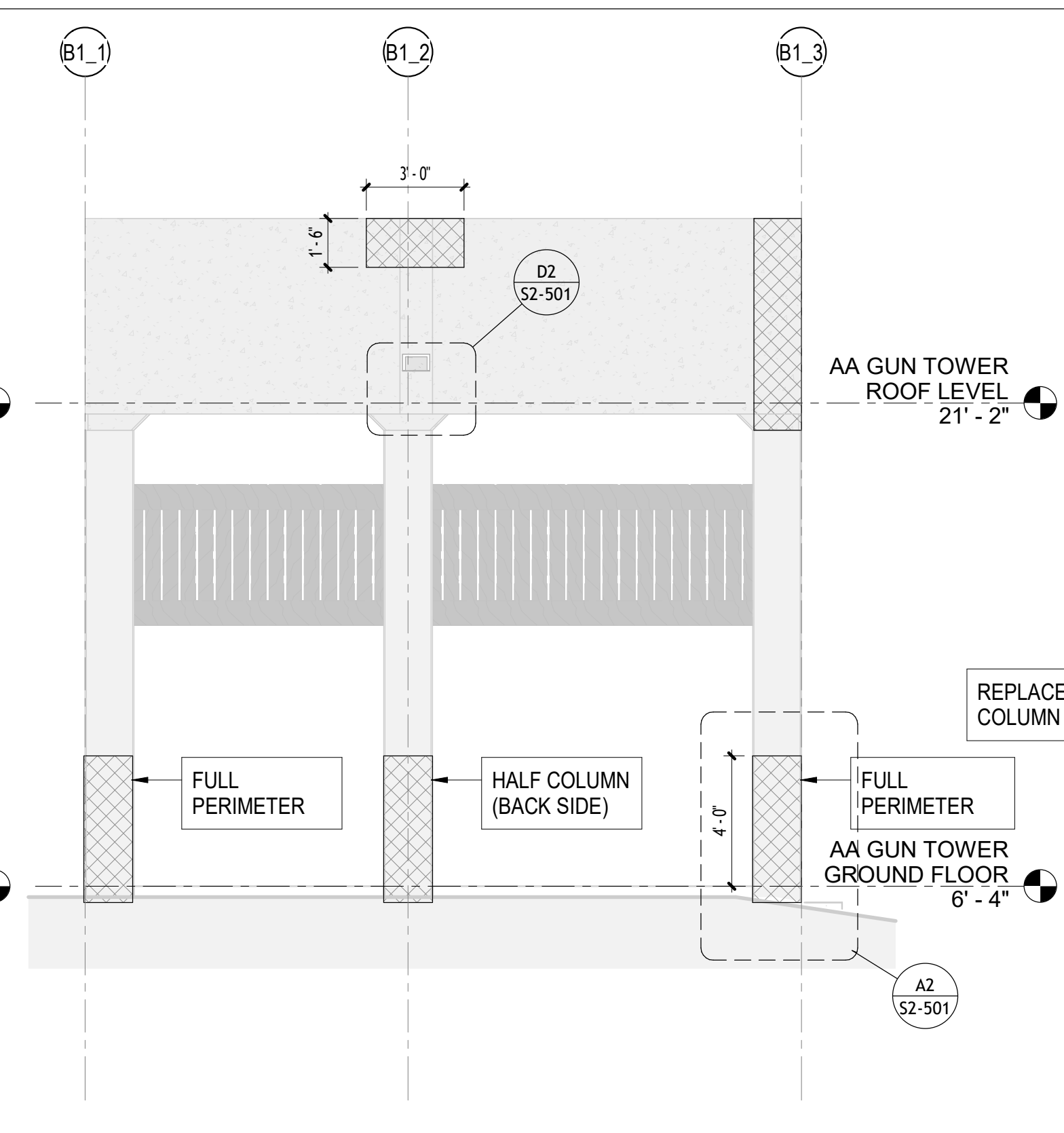
REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION <b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006 <b>STRUCTURAL INSPECTIONS</b>					
 EXPIRES: 4/30/2026		DESIGNED: LC, JM DRAWN: MCC CHECKED: LC, JM APPROVED: GC			
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION		SUBMITTED: BID SUBMITTAL <i>GC DL</i> DATE: 04/13/2026 SCALE: 3/4" = 1'-0" Dina Lau E-signed 2026-04-17 08:22AM HST dina.u.lau@hawaii.gov State of Hawaii Chief Engineer			
		<b>S-003</b>			



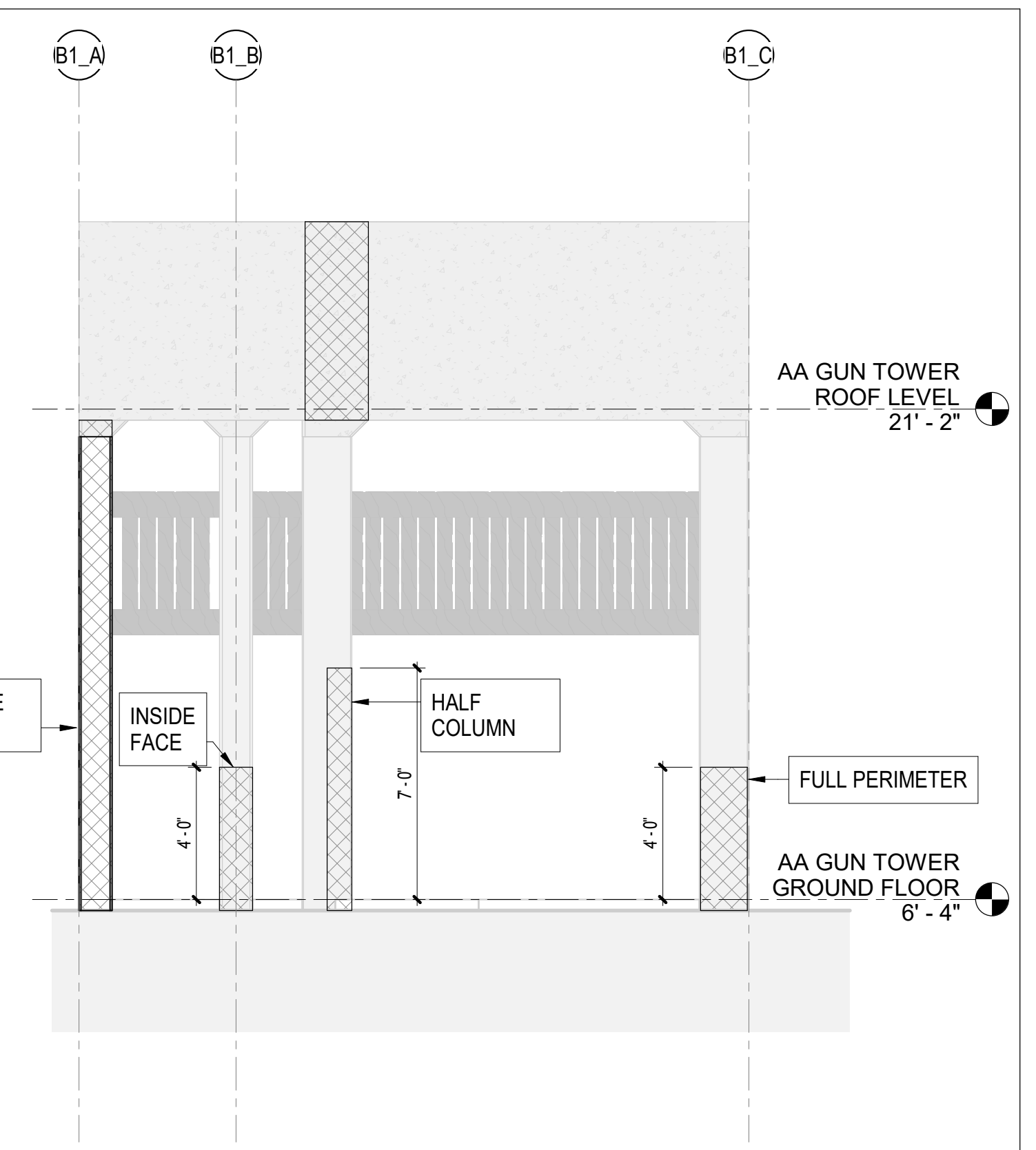
**3 AA TOWER NORTH FRAMING ELEVATION**  
SCALE: 1/4" = 1'-0"



**4 AA TOWER EAST FRAMING ELEVATION**  
SCALE: 1/4" = 1'-0"

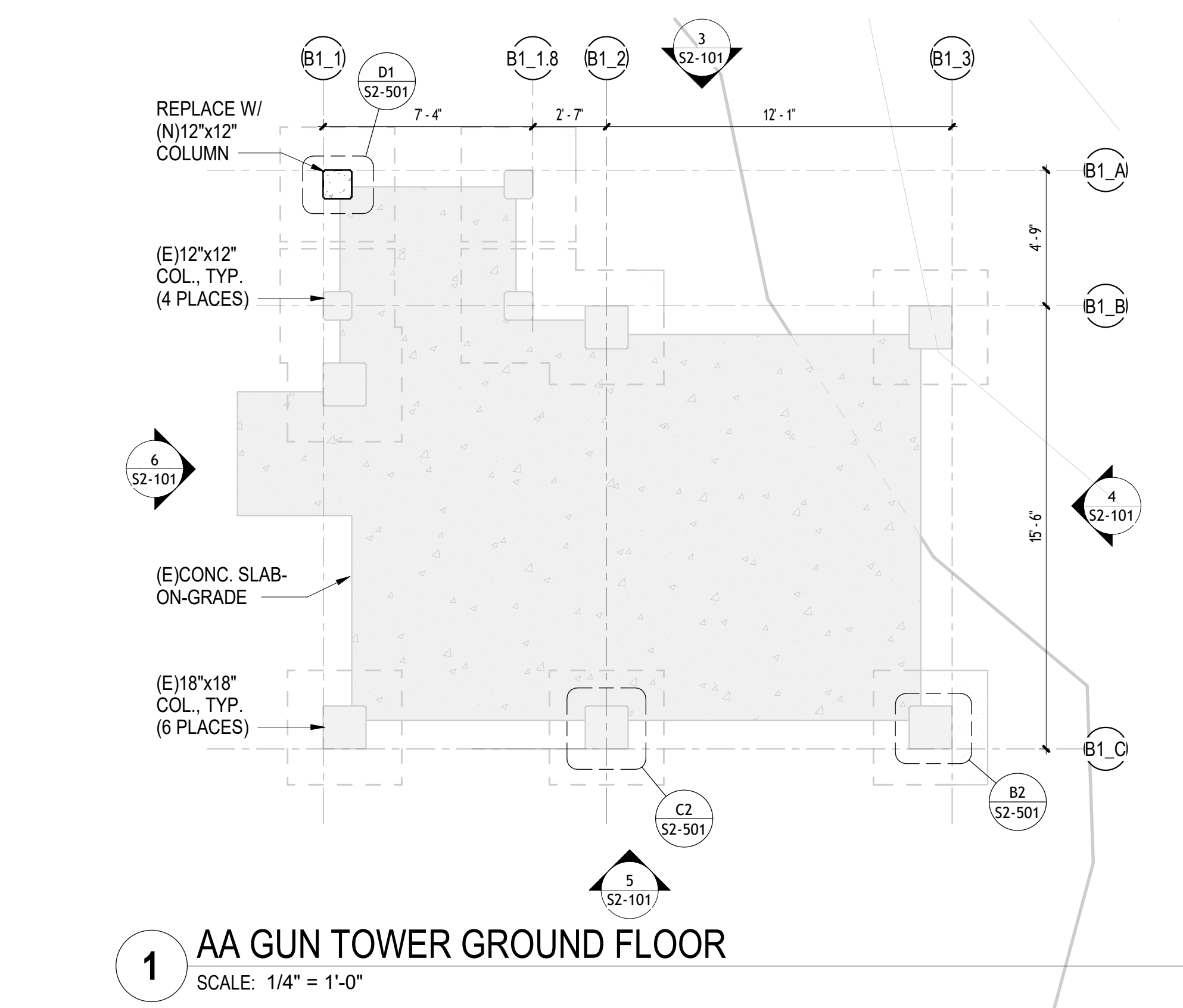


**5 AA TOWER SOUTH FRAMING ELEVATION**  
SCALE: 1/4" = 1'-0"

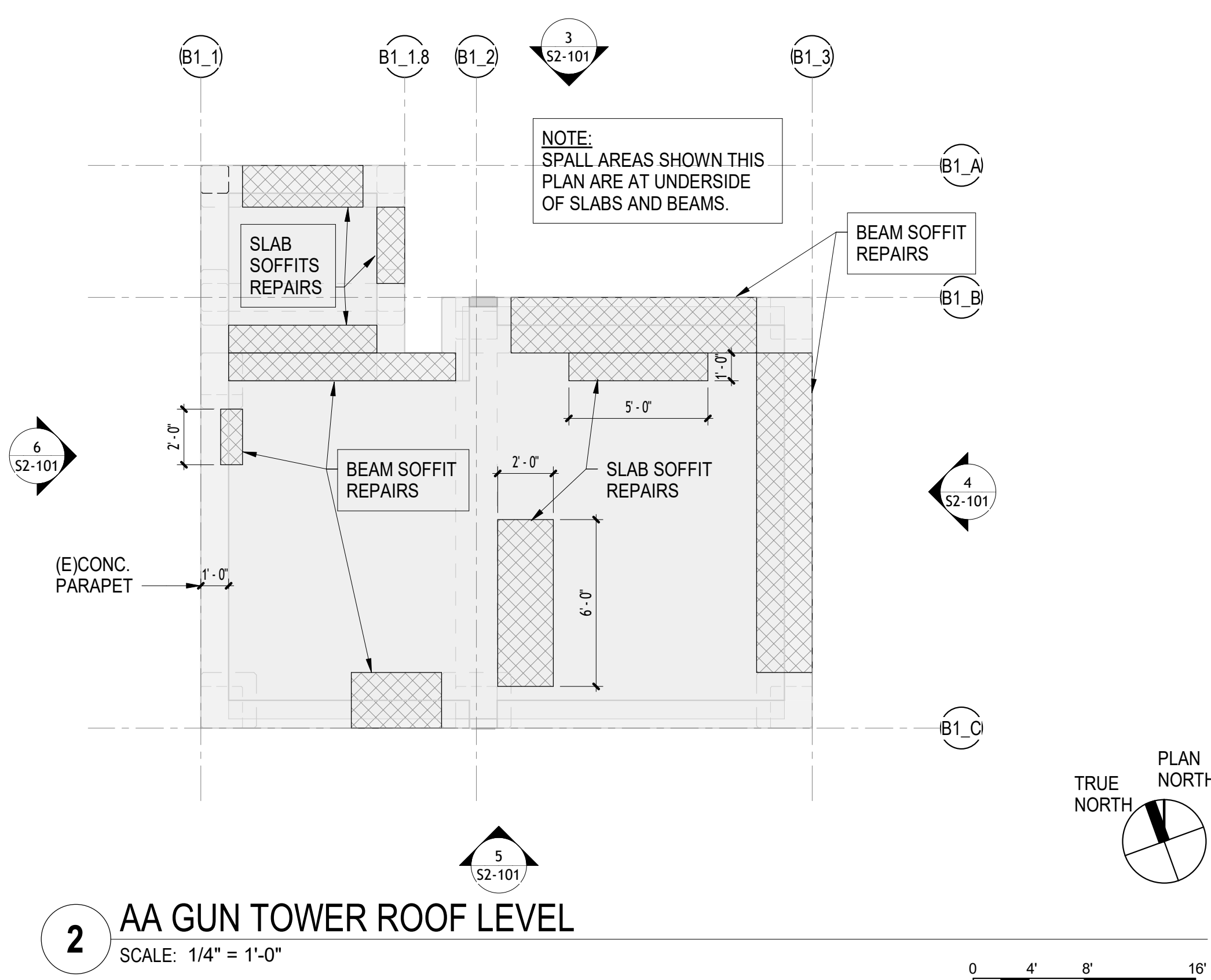


**6 AA TOWER WEST FRAMING ELEVATION**  
SCALE: 1/4" = 1'-0"

- NOTES:**
1. ALL FRAMING IS EXISTING UNLESS OTHERWISE NOTED AS NEW (N)
  2. TYPICAL CONCRETE REPAIRS ARE 4" DEEP UNLESS OTHERWISE NOTED.
  3. CONCRETE REPAIRS SHALL INCORPORATE THE USE OF GALVANIC ANODES (APPROX 1 PER SQUARE FOOT) TO EXTEND LIFE OF RESTORED CONCRETE SECTIONS.
  4. FILL EXISTING DRAIN HOLES IN THE ROOF AND RESLOPE TO SCUPPERS PER ARCH DRAWINGS.
  5. TEMPORARILY REMOVE THE WOOD SHADES, REPLACE CONNECTION HARDWARE WITH STAINLESS STEEL CONNECTORS AND REPLACE SHADES.
  6. SEE S-002 FOR TYPICAL CONCRETE REPAIR NOTES AND DETAILS.
  7. SEE S2-501 FOR SPECIFIC CONCRETE REPAIR DETAILS.



**1 AA GUN TOWER GROUND FLOOR**  
SCALE: 1/4" = 1'-0"



**2 AA GUN TOWER ROOF LEVEL**  
SCALE: 1/4" = 1'-0"

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED

EXPIRES: 4/30/2026

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

**SAND ISLAND SRA PARK IMPROVEMENTS PH. VI**  
TAX MAP KEY: 1-5-041:006  
**ANTI-AIRCRAFT GUN EMPLACEMENT TOWER FRAMING PLANS**

DESIGNED: LC  
DRAWN: MCC  
CHECKED: LC  
APPROVED: GC

Submitted: BID SUBMITTAL  
DATE: 04/13/2026  
SCALE: 1/4" = 1'-0"

DL

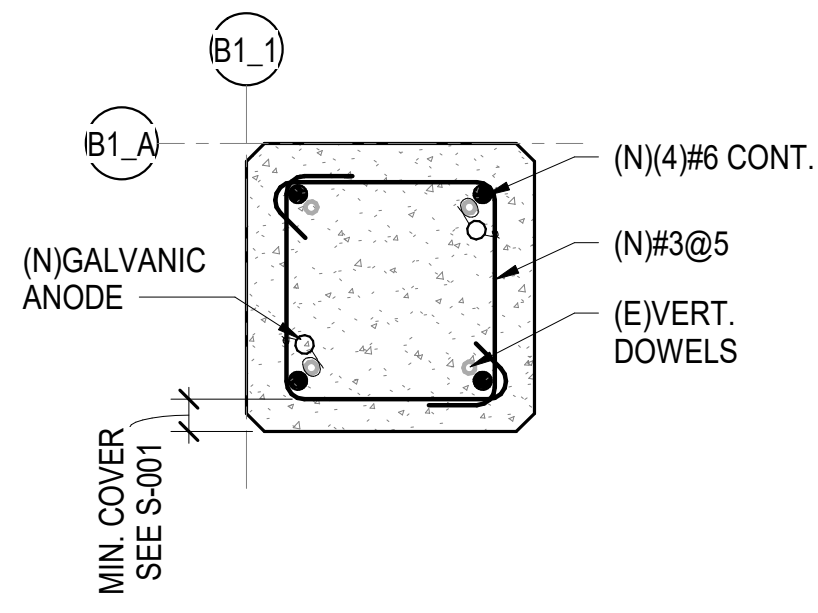
S2-101

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

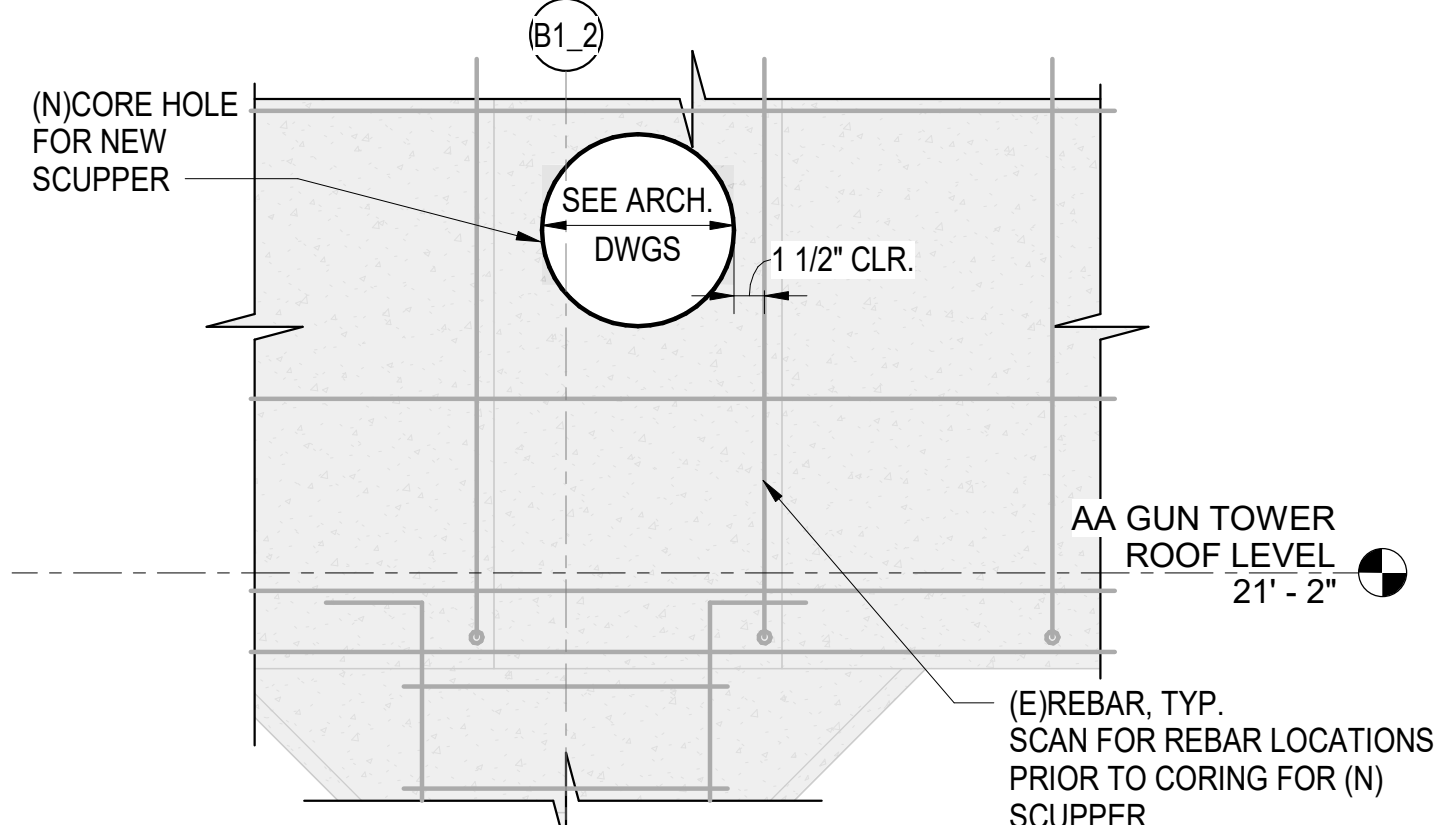
Dina Lau  
E-signed 2026-04-17 08:22AM HST  
dina.u.lau@hawaii.gov  
State of Hawaii  
Civil Engineer

JOB NO. F70C616H 25 OF 29 SHEETS.

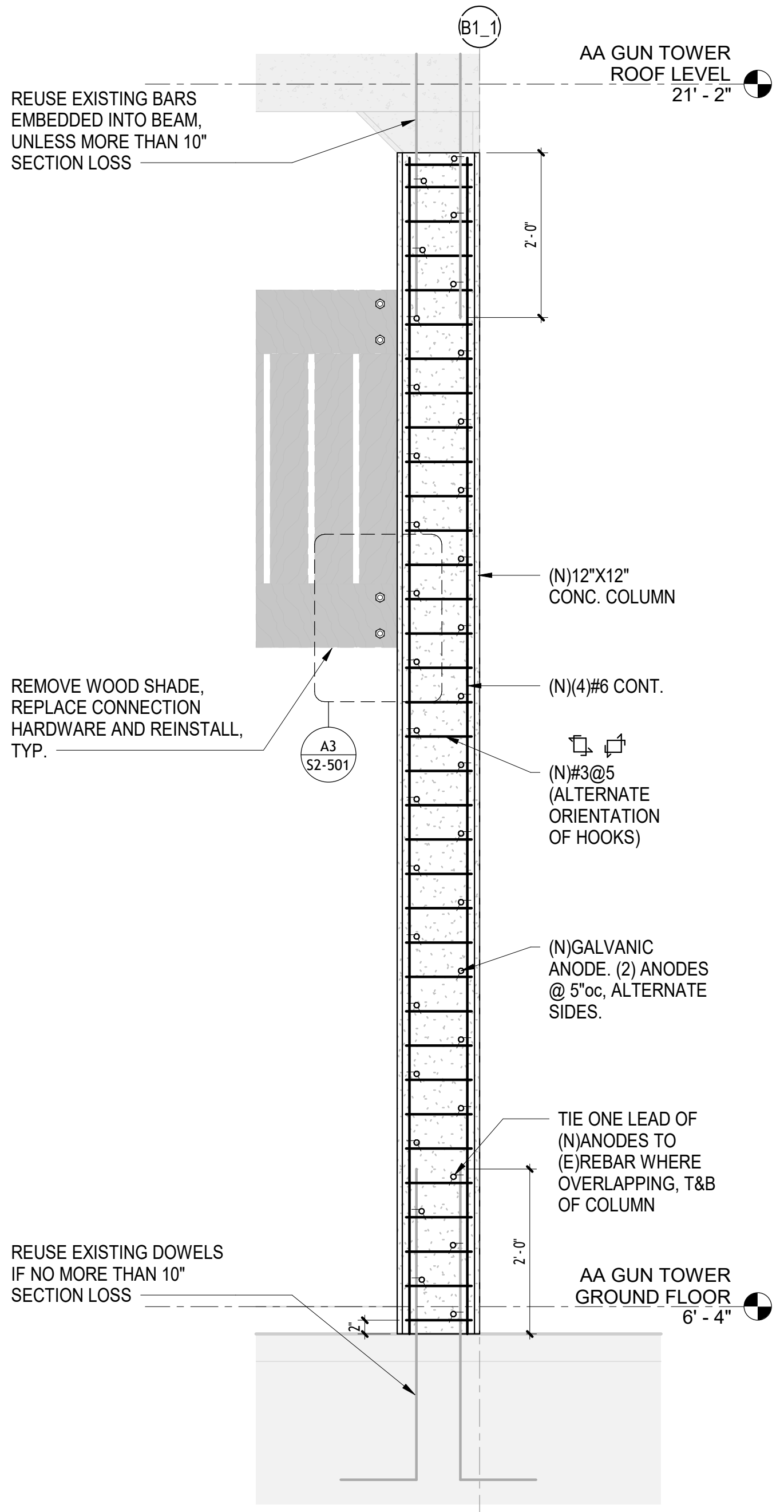
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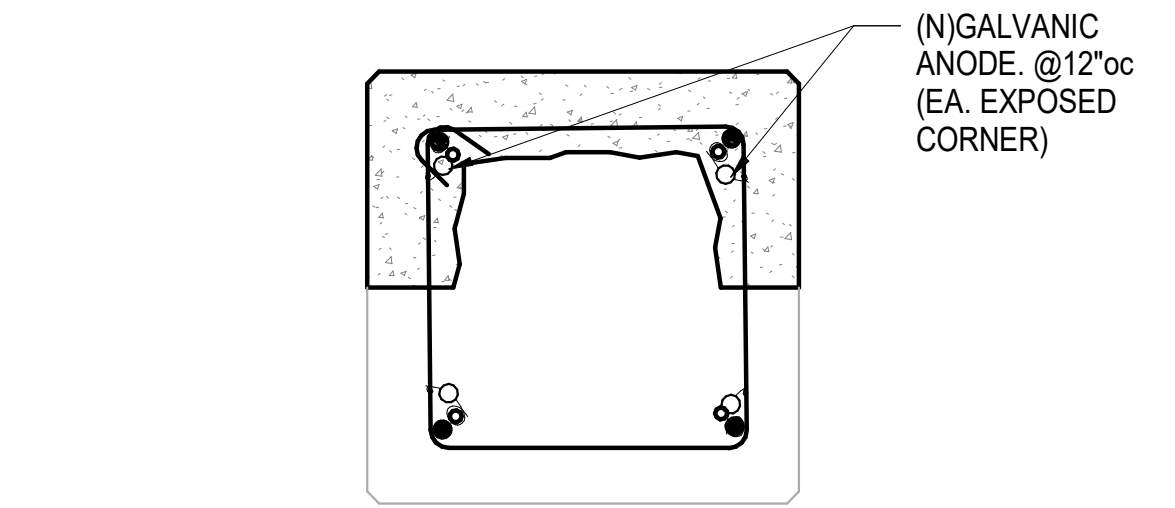
**D1 NEW COLUMN (PLAN SECTION)**  
SCALE: 1 1/2" = 1'-0"



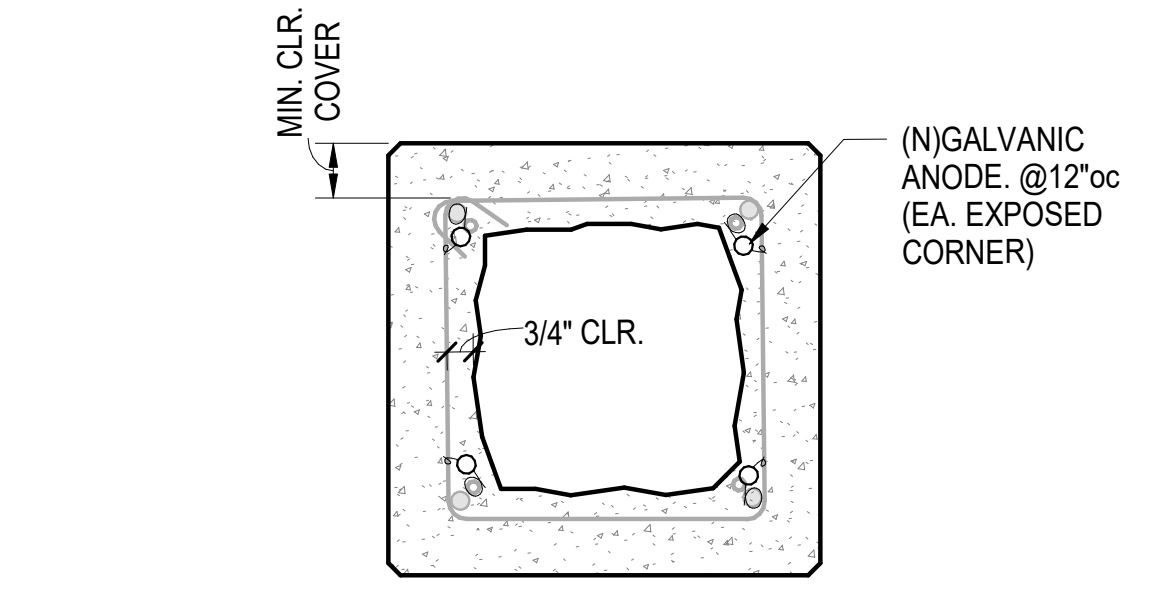
**D2 SCUPPER DETAIL**  
SCALE: 1 1/2" = 1'-0"



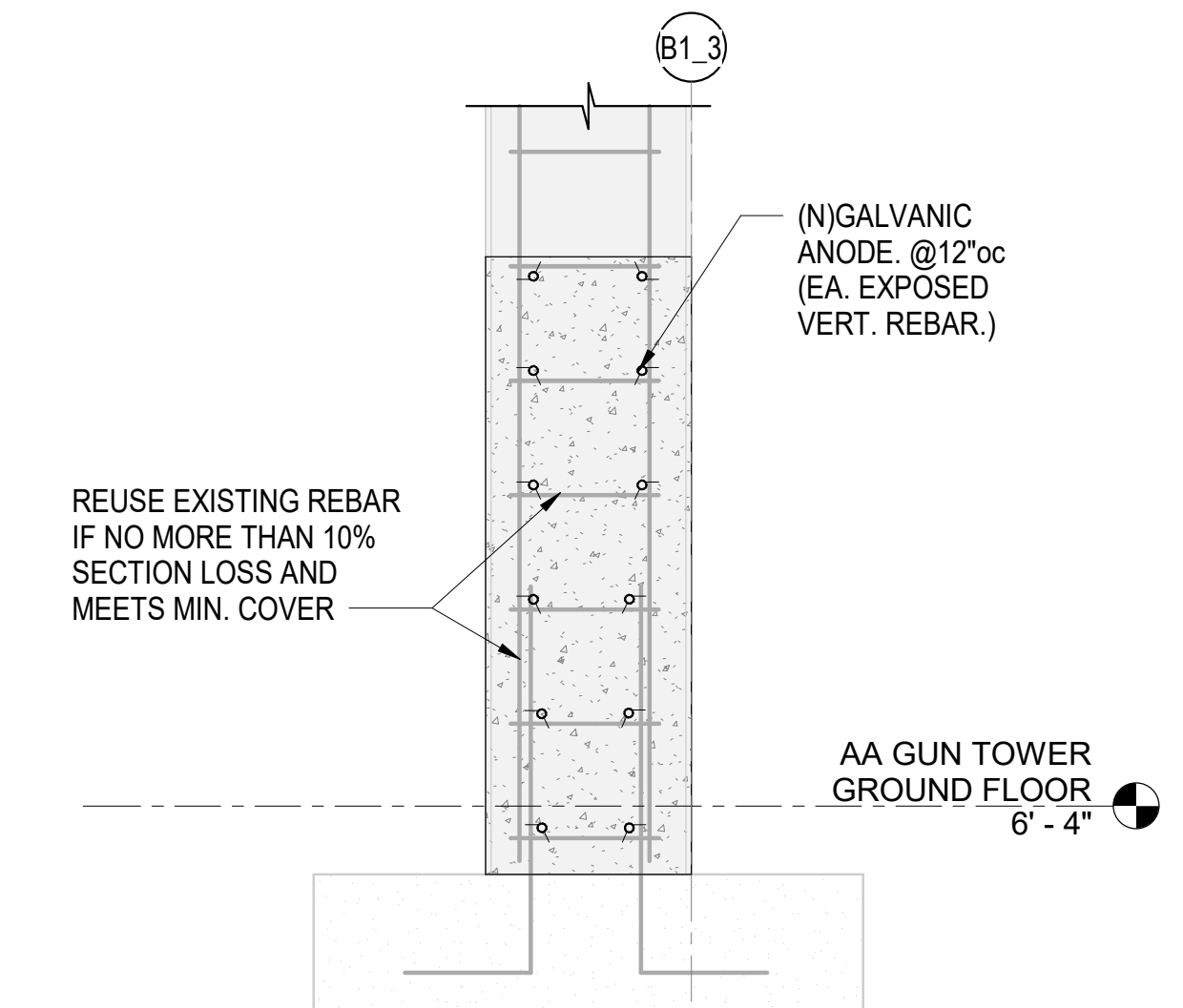
**A1 AA TOWER COLUMN REPLACEMENT**  
SCALE: 3/4" = 1'-0"



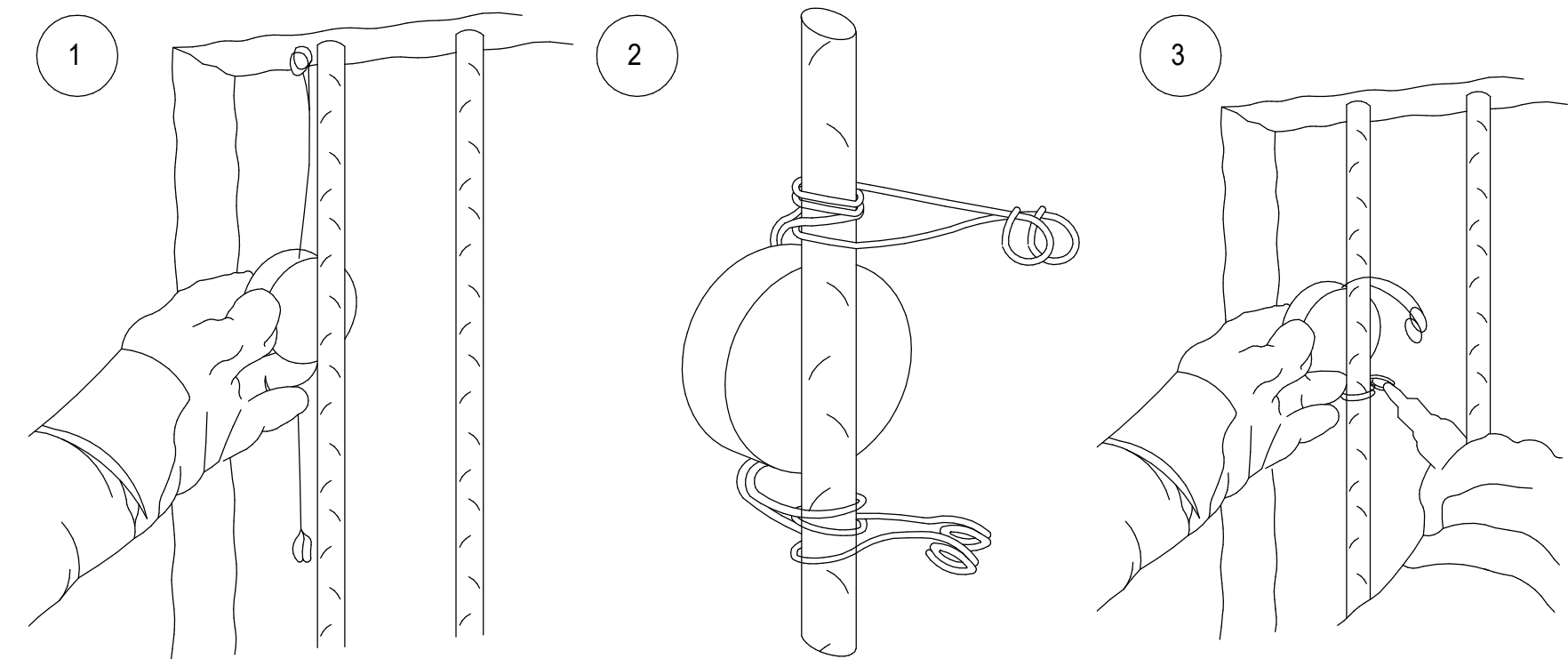
**C2 PLAN SECTION (1/2 PERIMETER REPAIR)**  
SCALE: 1 1/2" = 1'-0"



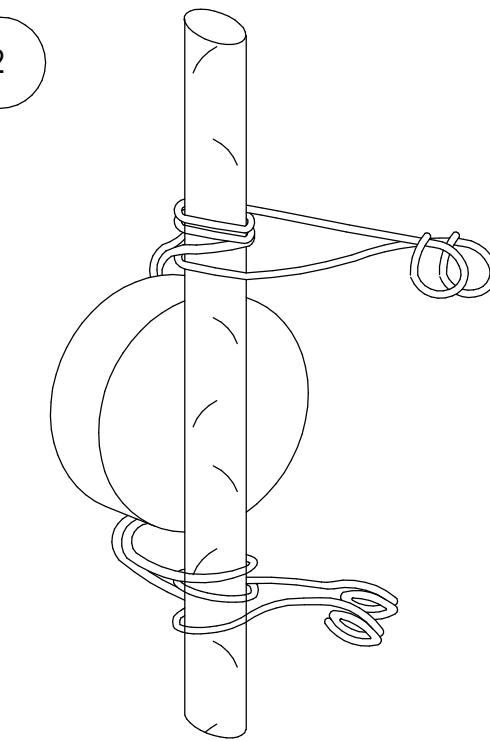
**B2 PLAN SECTION (FULL PERIMETER REPAIR)**  
SCALE: 1 1/2" = 1'-0"



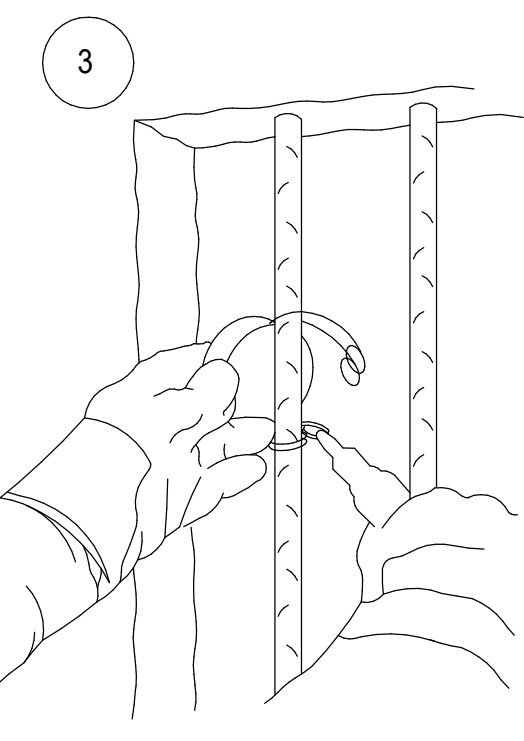
**A2 AA TOWER BASE COLUMN REPAIR**  
SCALE: 3/4" = 1'-0"



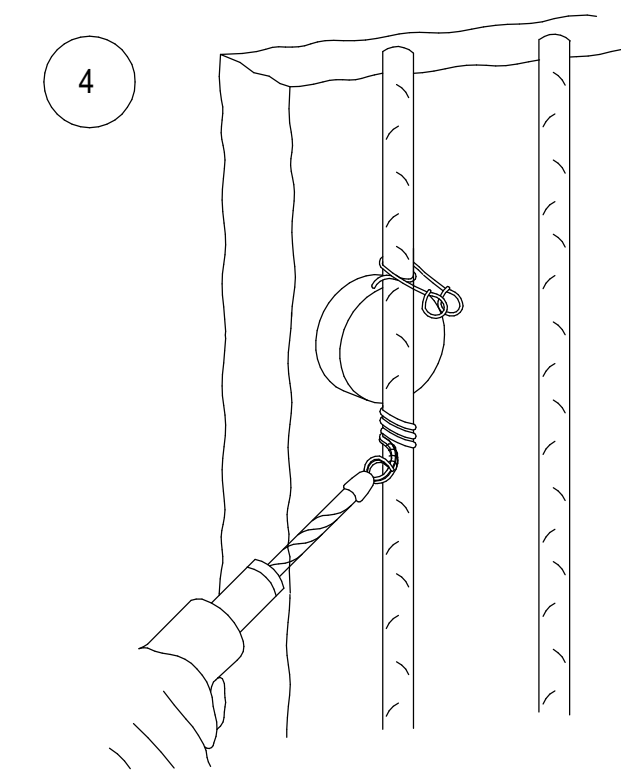
1) POSITION ANODE AGAINST REBAR IN THE APPROPRIATE LOCATION INDICATED IN INSTALLATION INSTRUCTIONS AND/OR AS DESCRIBED IN THE SPECIFICATIONS.



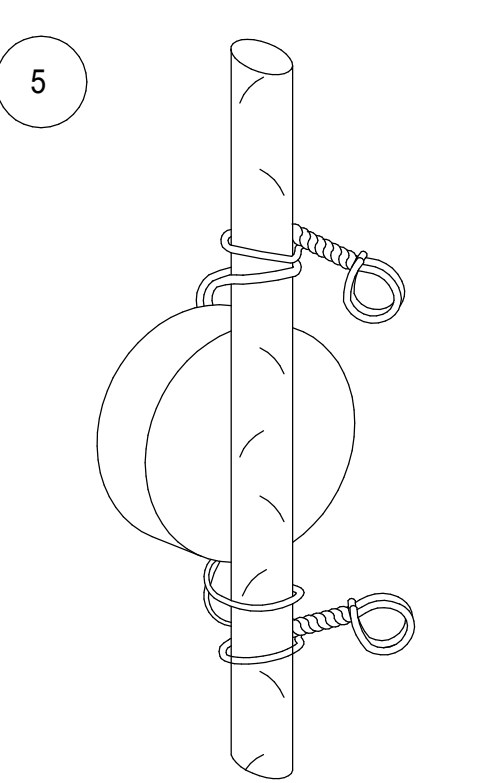
2) BEND WIRES TO EITHER SIDE OF REBAR, WRAP AROUND TWICE (IF POSSIBLE) AND PLACE WIRE HOOPS TOGETHER



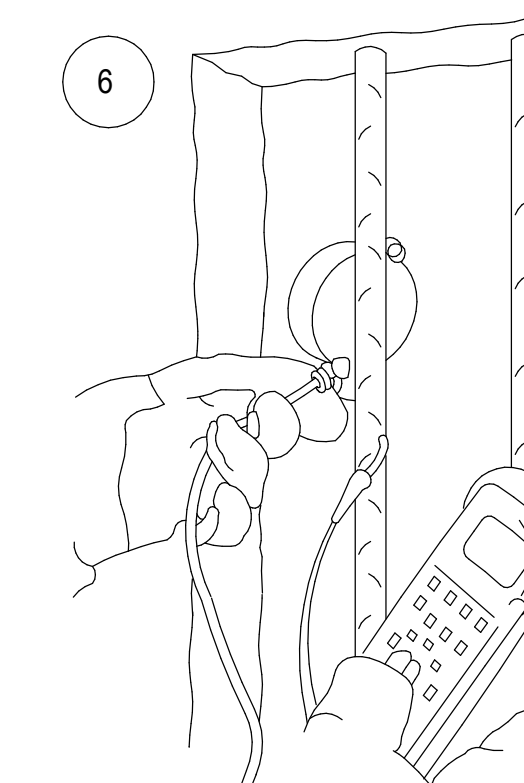
3) GRASP WIRE HOOPS WITH WIRE TWIST TIE TOOL OR PLIERS.



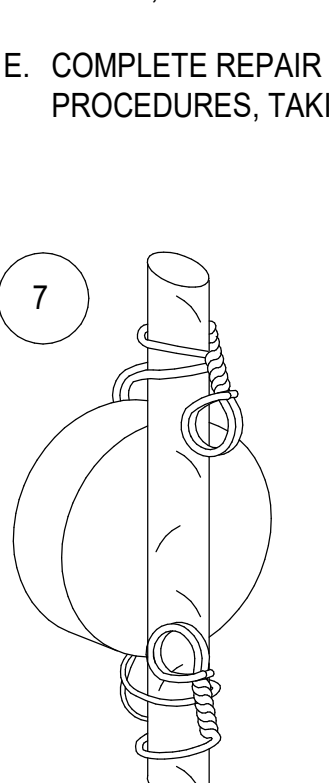
4) USE WIRE TWIST TOOL OR PLIERS TO STEADILY TWIST AND TIGHTEN WIRES



5) REPEAT STEPS 3 & 4 AT SECOND SET OF WIRES TO SECURE UNIT TO REBAR

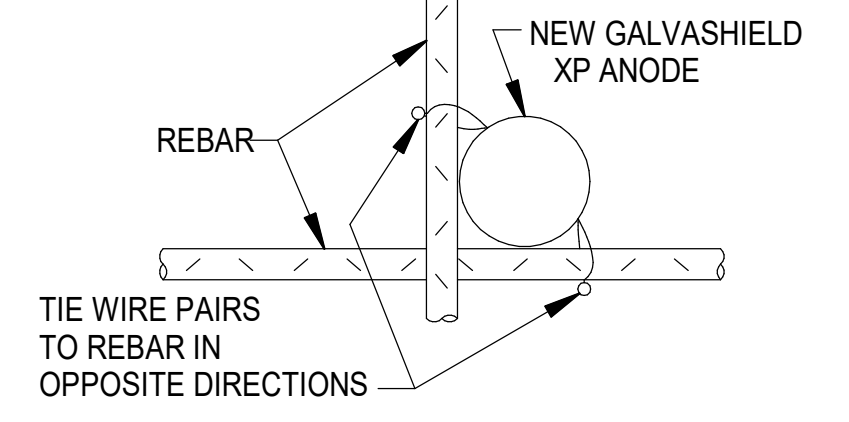


6) CHECK THAT WIRES ARE ELECTRICALLY CONNECTED TO THE REBAR USING A STANDARD MULTIMETER; IF WIRES ARE NOT CONNECTED, TIGHTEN & CHECK AGAIN.



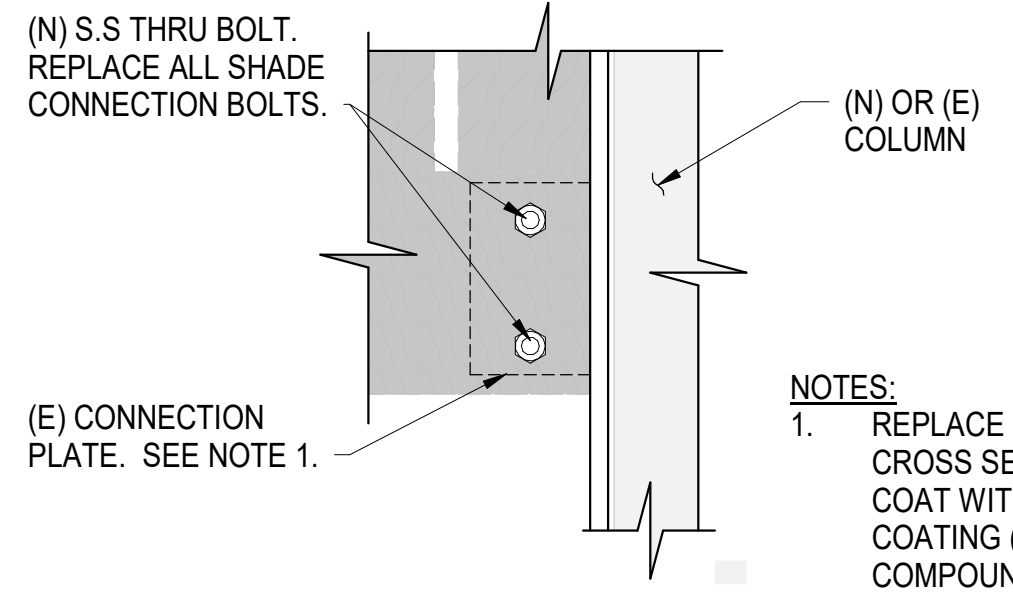
7) NEST WIRE HOOPS AGAINST REBAR

**C3 GALVANIC ANODE INSTALLATION PROCEDURE**  
SCALE: 3/4" = 1'-0"



TYPICAL INSTALLATION @ INTERSECTION

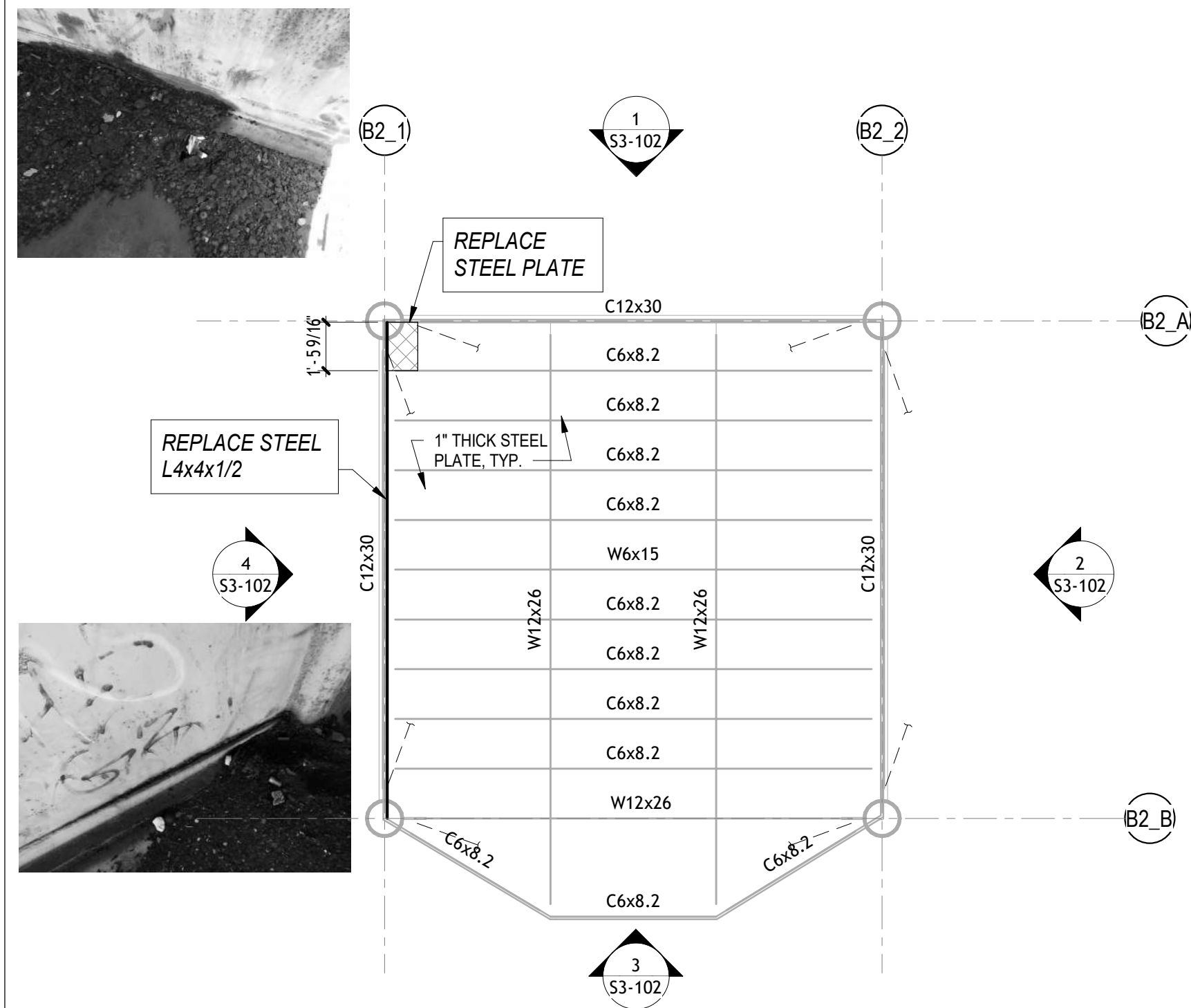
RECOMMENED SUPPLIER (OR APPROVED EQUAL):  
VECTOR CORROSION TECHNOLOGIES  
474 DOVERCOURT DR.  
WINNIPEG, MANITOBA  
CANADA R3Y 1G4  
USA PHONE: (813)830-7566



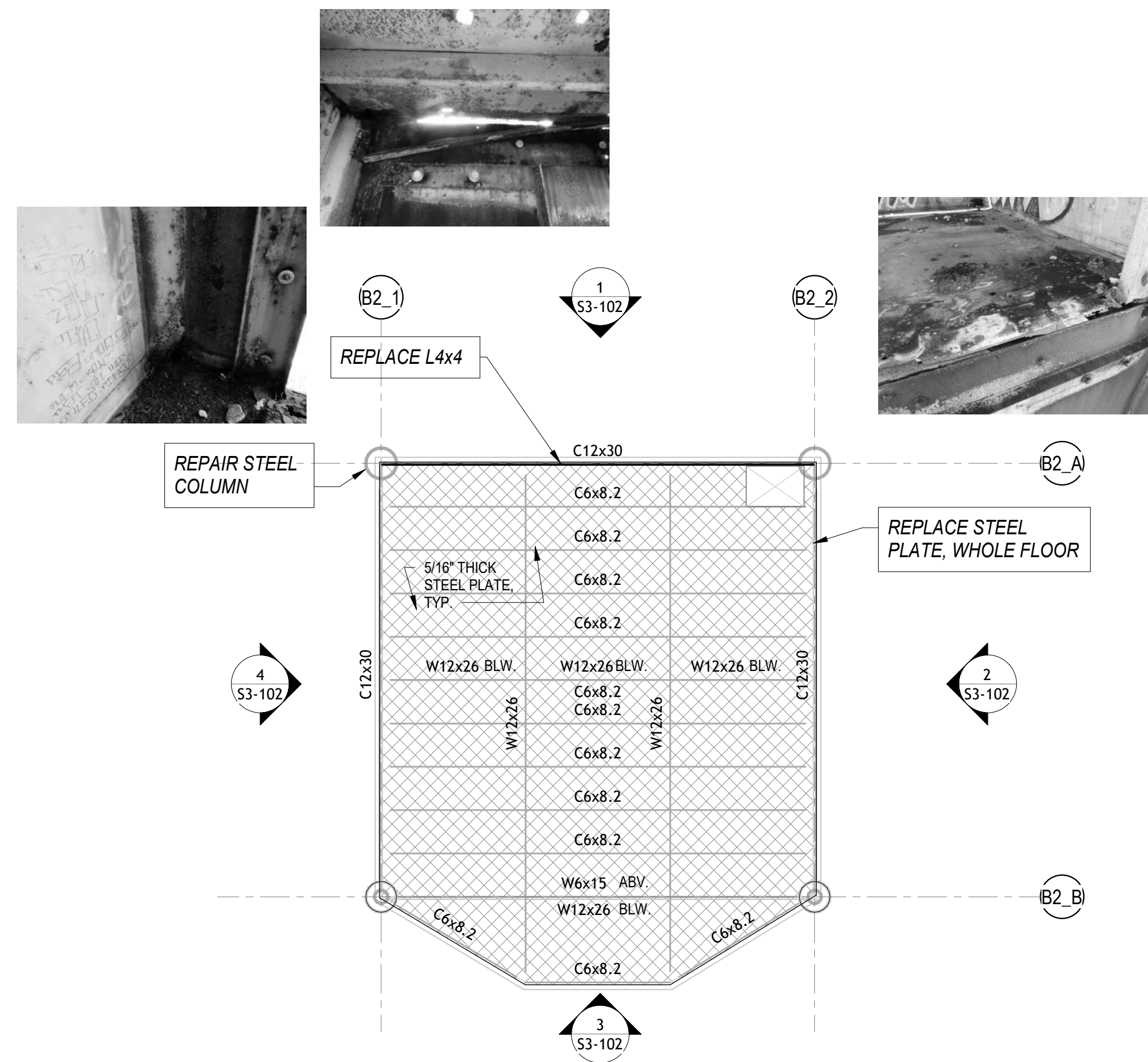
**A3 TYPICAL SHADE CONNECTION**  
SCALE: 1 1/2" = 1'-0"

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION <b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006 <b>CONCRETE REPAIR DETAILS</b>					
DESIGNED: Designer					
DRAWN: Author		SUBMITTED: BID SUBMITTAL <input checked="" type="checkbox"/> DL			
CHECKED: Checker		DATE: 04/13/2026			
APPROVED: Approver		SCALE: As indicated			
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION CHIEF ENGINEER: Dina Lau E-signed 2026-04-17 08:22AM HST dina.lau@hawaii.gov State of Hawaii Civil Engineer					
<b>S2-501</b> EXPIRES: 4/30/2026 JOB NO. F70C616H 26 OF 29 SHEETS.					

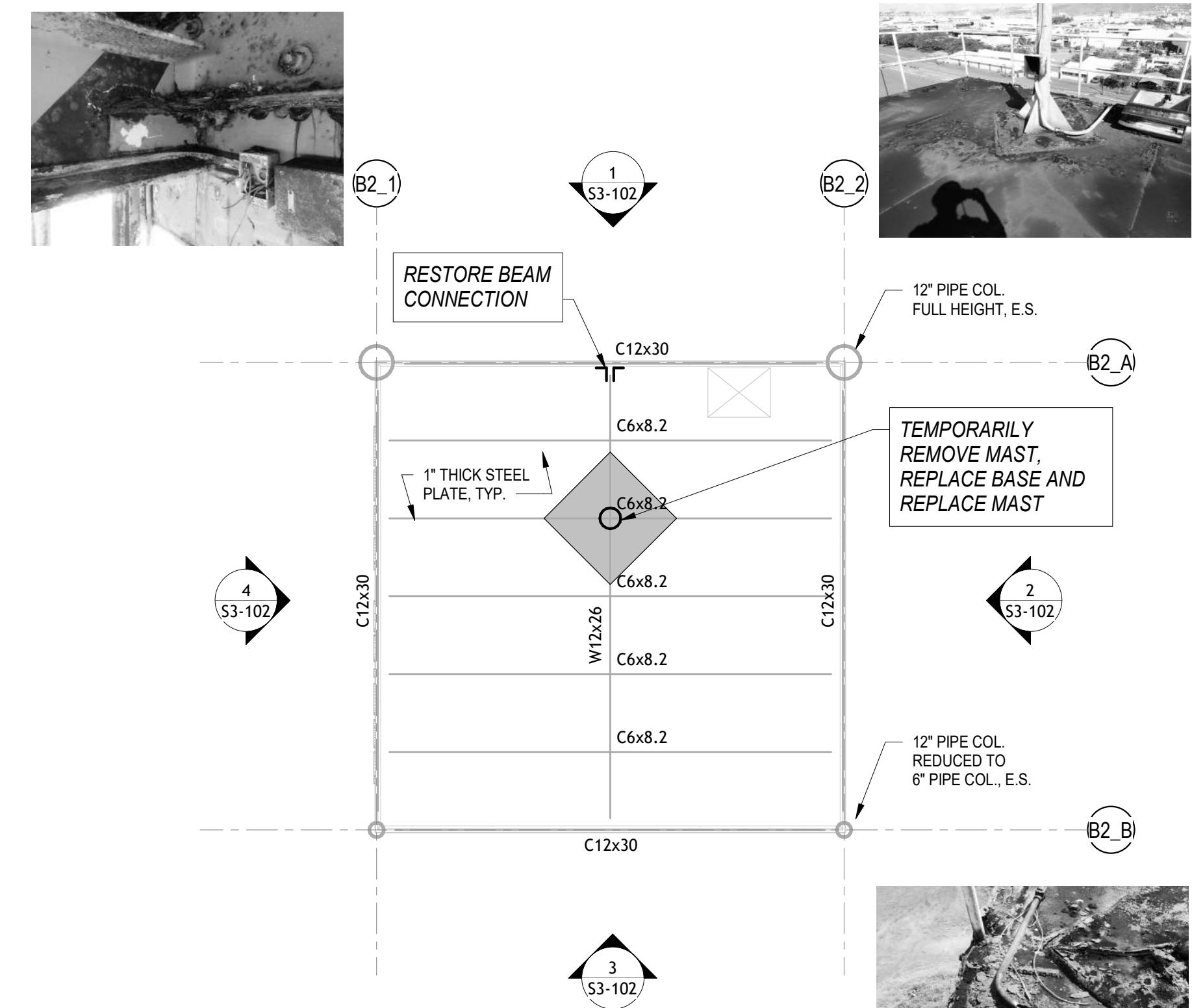
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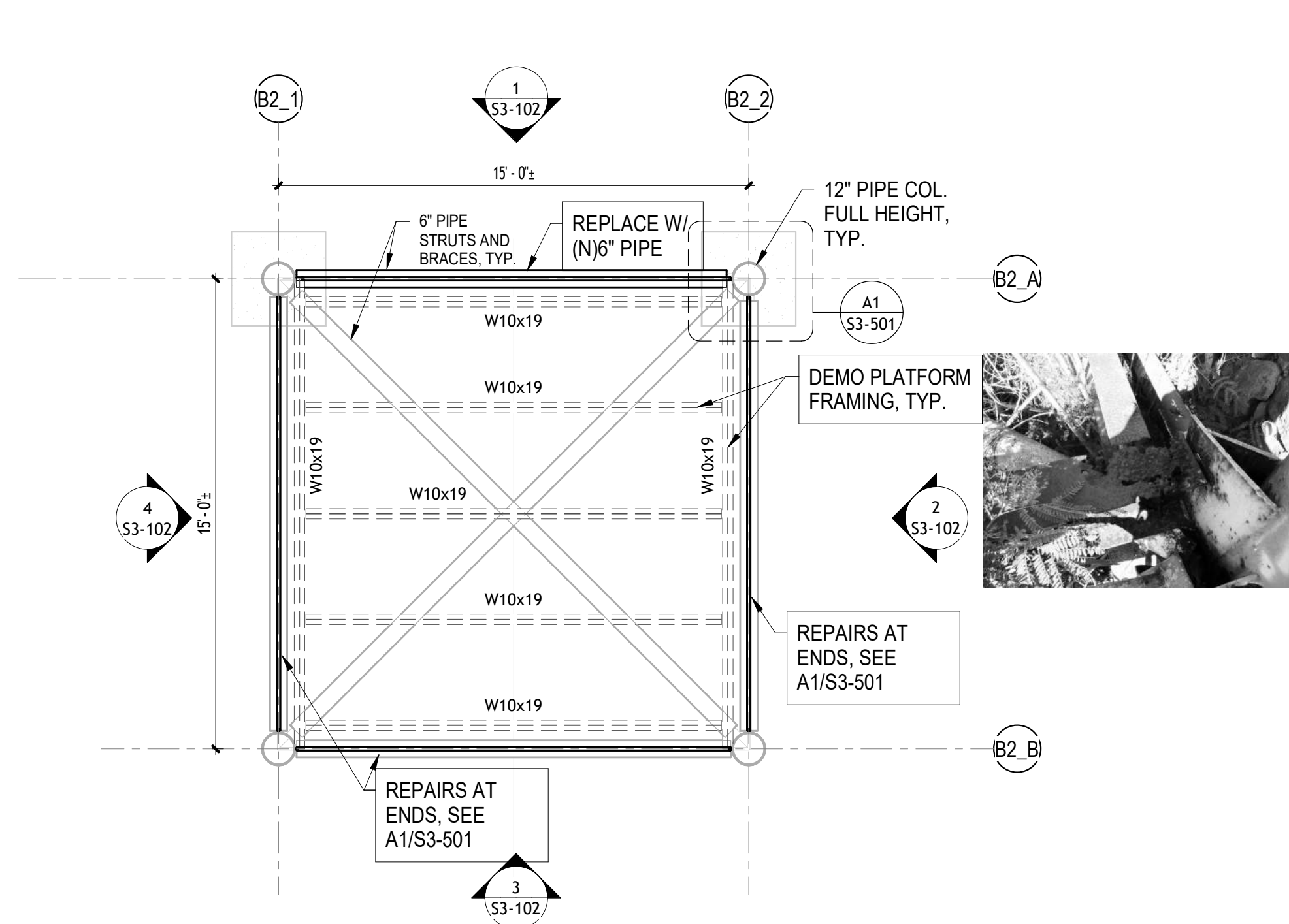
**3 LOWER TOWER DECK LEVEL**  
SCALE: 1/4" = 1'-0"



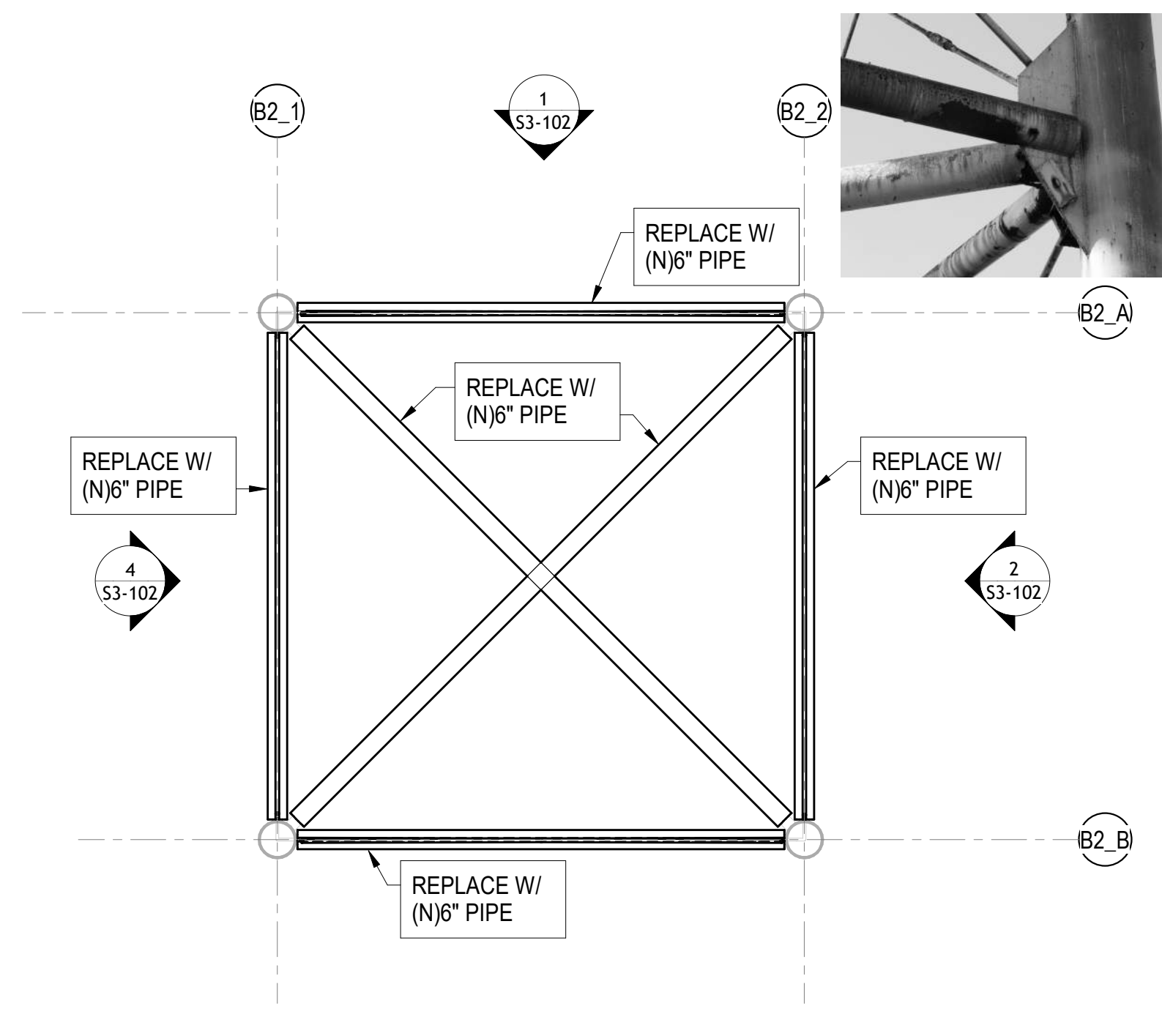
**4 INTERMEDIATE TOWER DECK LEVEL**  
SCALE: 1/4" = 1'-0"



**5 TOWER ROOF DECK LEVEL**  
SCALE: 1/4" = 1'-0"

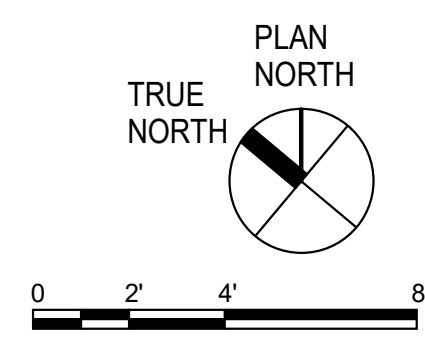


**1 LOWER PLATFORM LEVEL**  
SCALE: 1/4" = 1'-0"



**2 INTERMEDIATE BRACE PLATFORM LEVEL**  
SCALE: 1/4" = 1'-0"

- NOTES:**
1. NEW WORK NOTED IN PLAIN TEXT IS BASE BID. WORK NOTED IN *ITALICS* IS BID ALTERNATE NO 2.
  2. ALL FRAMING IS EXISTING UNLESS OTHERWISE NOTED AS NEW (N)
  3. SEAL ENDS OF ALL 6" PIPE STRUTS AND BRACES TO PREVENT WATER INFILTRATION TO INSIDE OF BRACES.
  4. ALL STEEL FRAMING SHALL BE MACHINE TOOL CLEANED, LOOSE RUST REMOVED AND REPAINTED AFTER REPAIRS AND REPLACEMENTS ARE COMPLETED.



REVISION NO.	SYM.	DESCRIPTION	SH. OF	DATE	APPROVED

EXPIRES: 4/30/2026

**STATE OF HAWAII**  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

**SAND ISLAND SRA PARK IMPROVEMENTS PH. VI**  
TAX MAP KEY: 1-5-041:006

**HARBOR ENTRANCE CONTROL TOWER FRAMING PLANS**

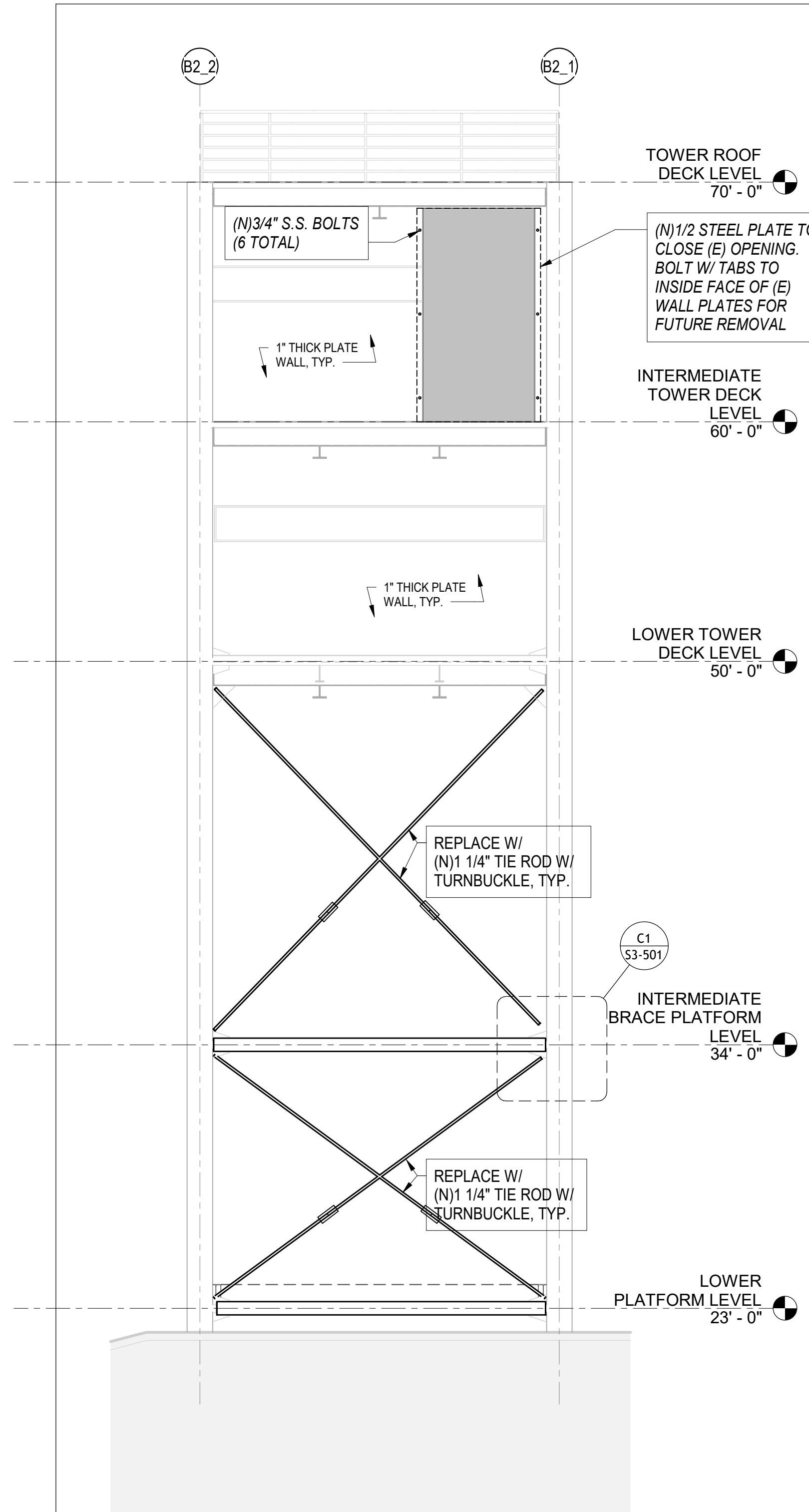
DESIGNED: LC  
DRAWN: MCC  
CHECKED: LC  
APPROVED: GC

DATE: 04/13/2026  
SCALE: 1/4" = 1'-0"

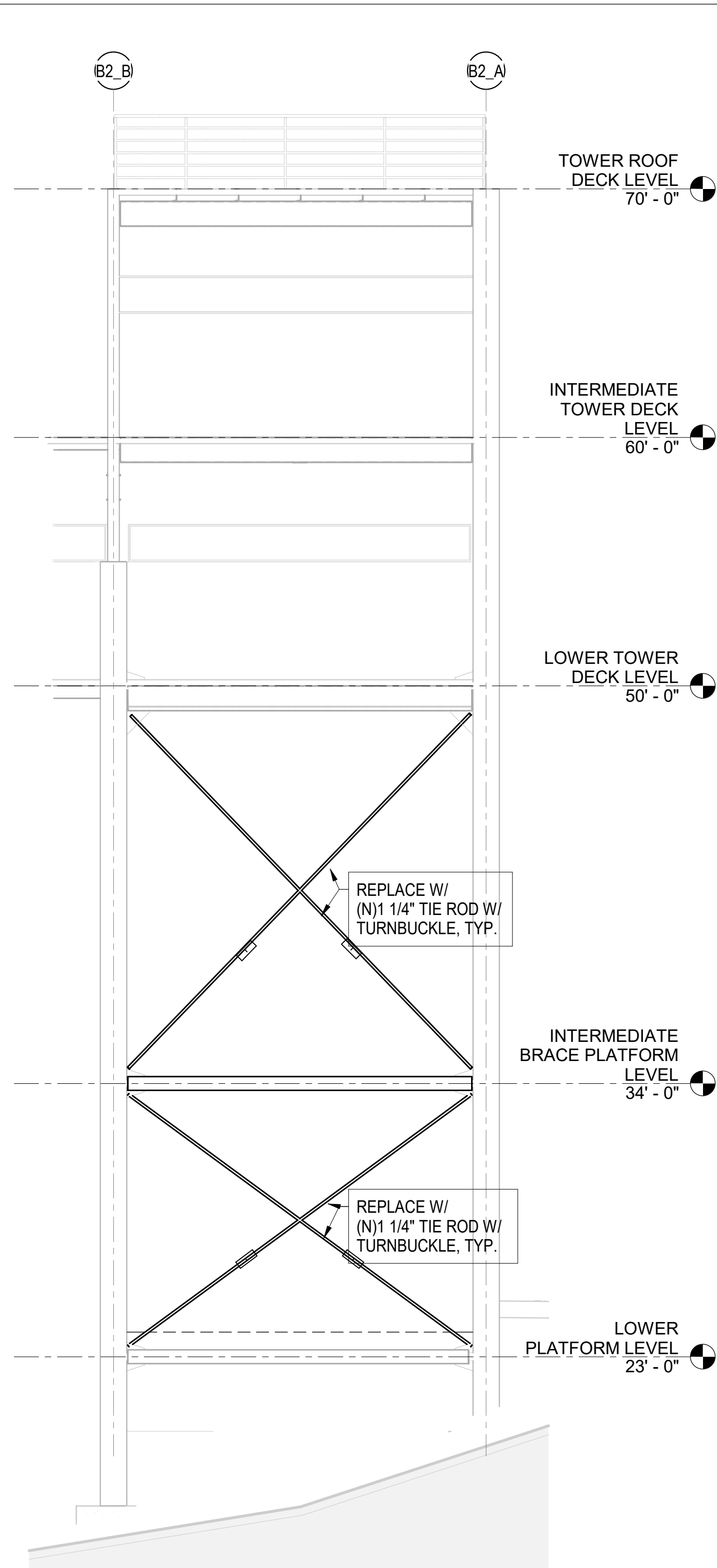
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

CHIEF ENGINEER: **Dina Lau**  
E-signed 2026-04-17 08:22AM HST  
dina.lau@hawaii.gov  
State of Hawaii  
Civil Engineer

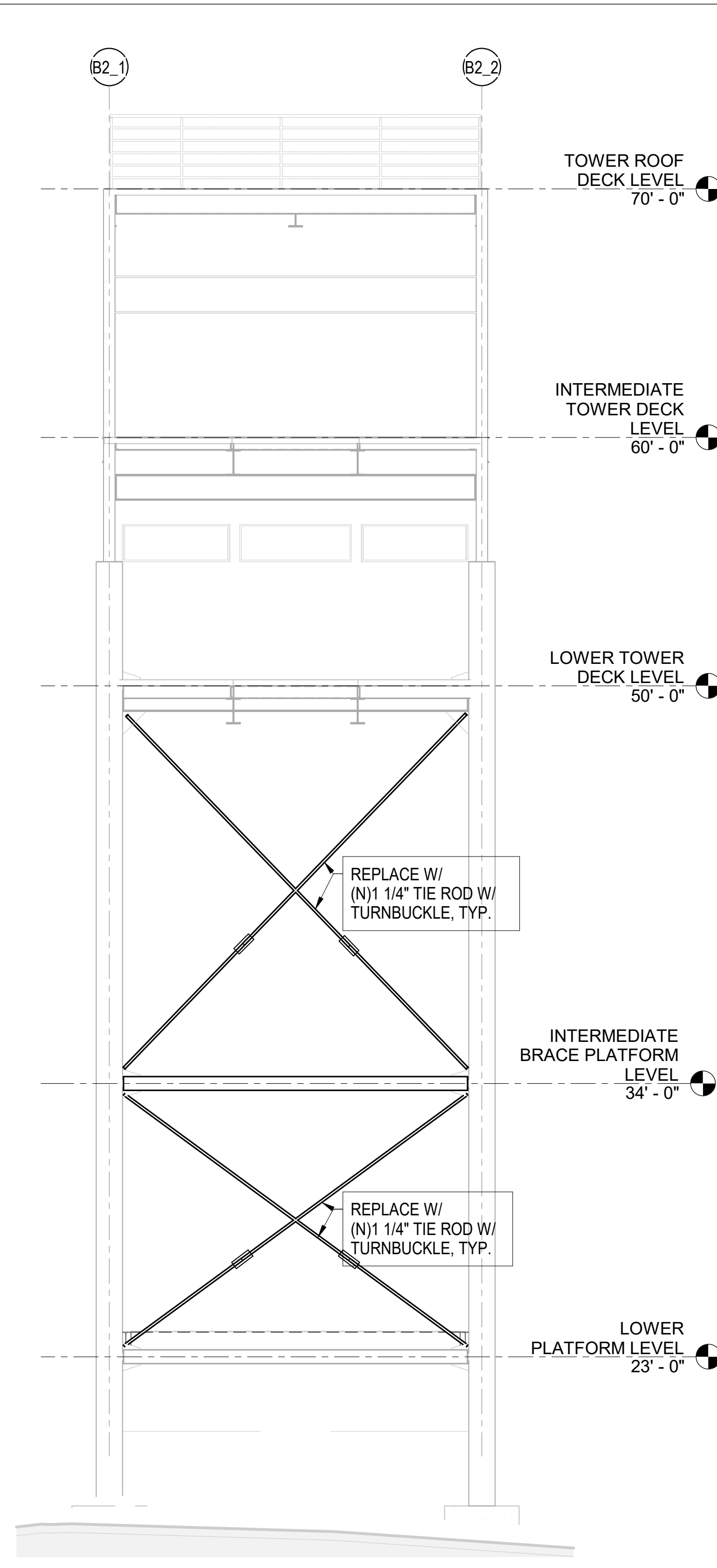
**S3-101**



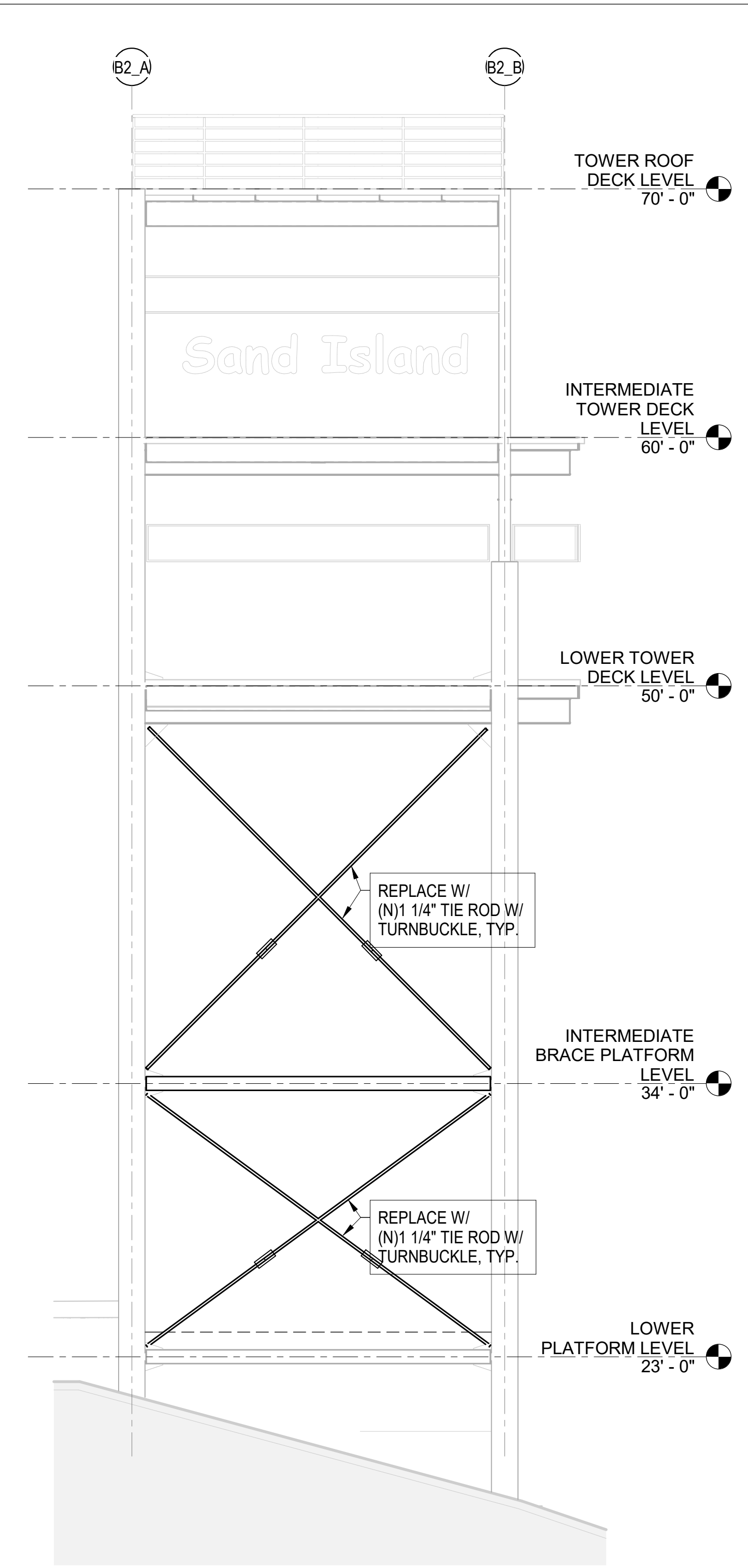
**1** NORTH FRAMING ELEVATION  
SCALE: 1/4" = 1'-0"



**2** EAST FRAMING ELEVATION  
SCALE: 1/4" = 1'-0"



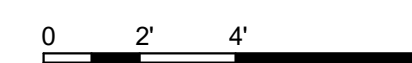
**3** SOUTH FRAMING ELEVATION  
SCALE: 1/4" = 1'-0"



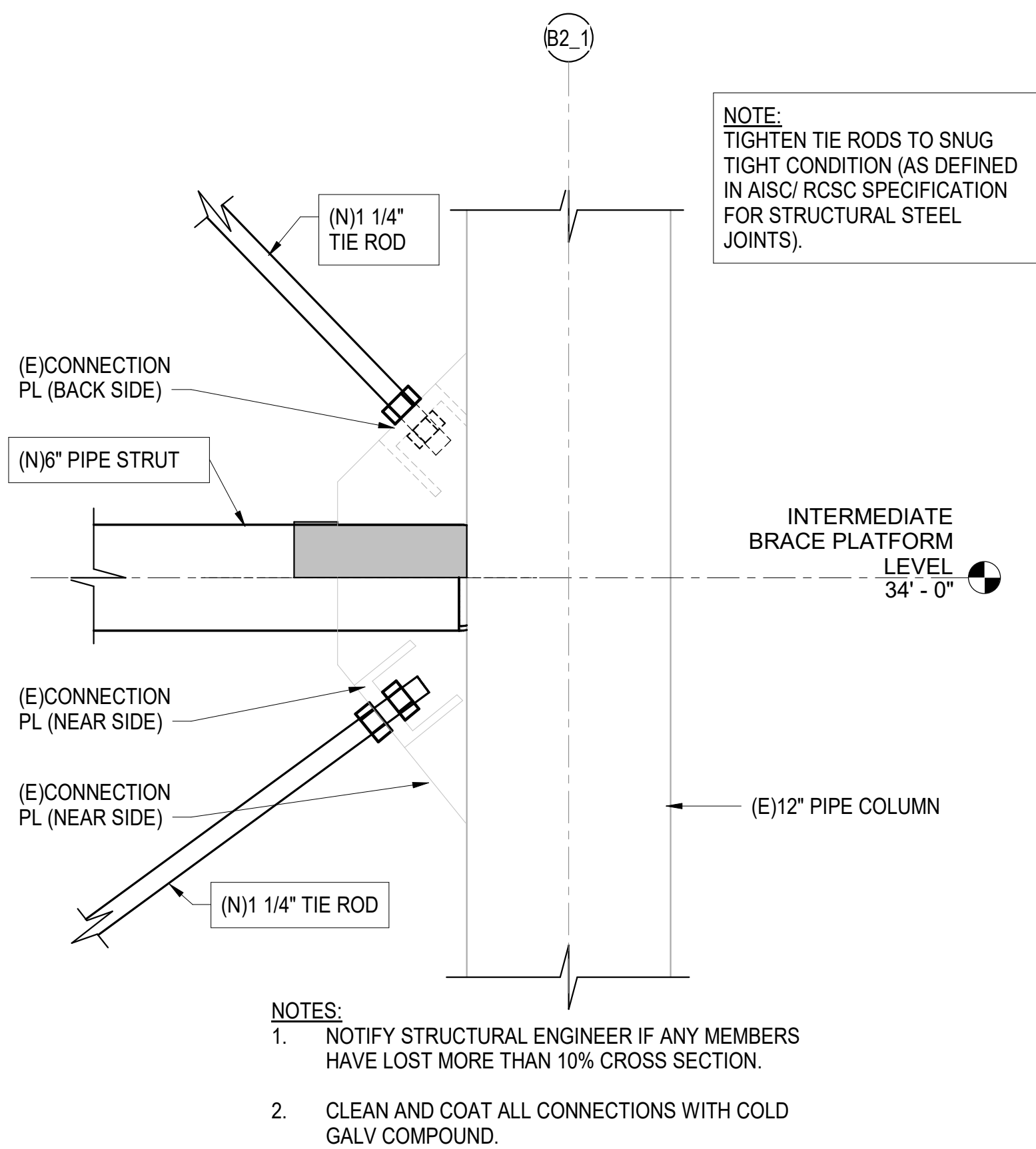
**4** WEST FRAMING ELEVATION  
SCALE: 1/4" = 1'-0"

**NOTES:**

1. NEW WORK NOTED IN PLAIN TEXT IS BASE BID. WORK NOTED IN *ITALICS* IS BID ALTERNATE NO 2.
2. ALL FRAMING IS EXISTING UNLESS OTHERWISE NOTED AS NEW (N)
3. REPLACE ALL TIE RODS AND TURNBUCKLES



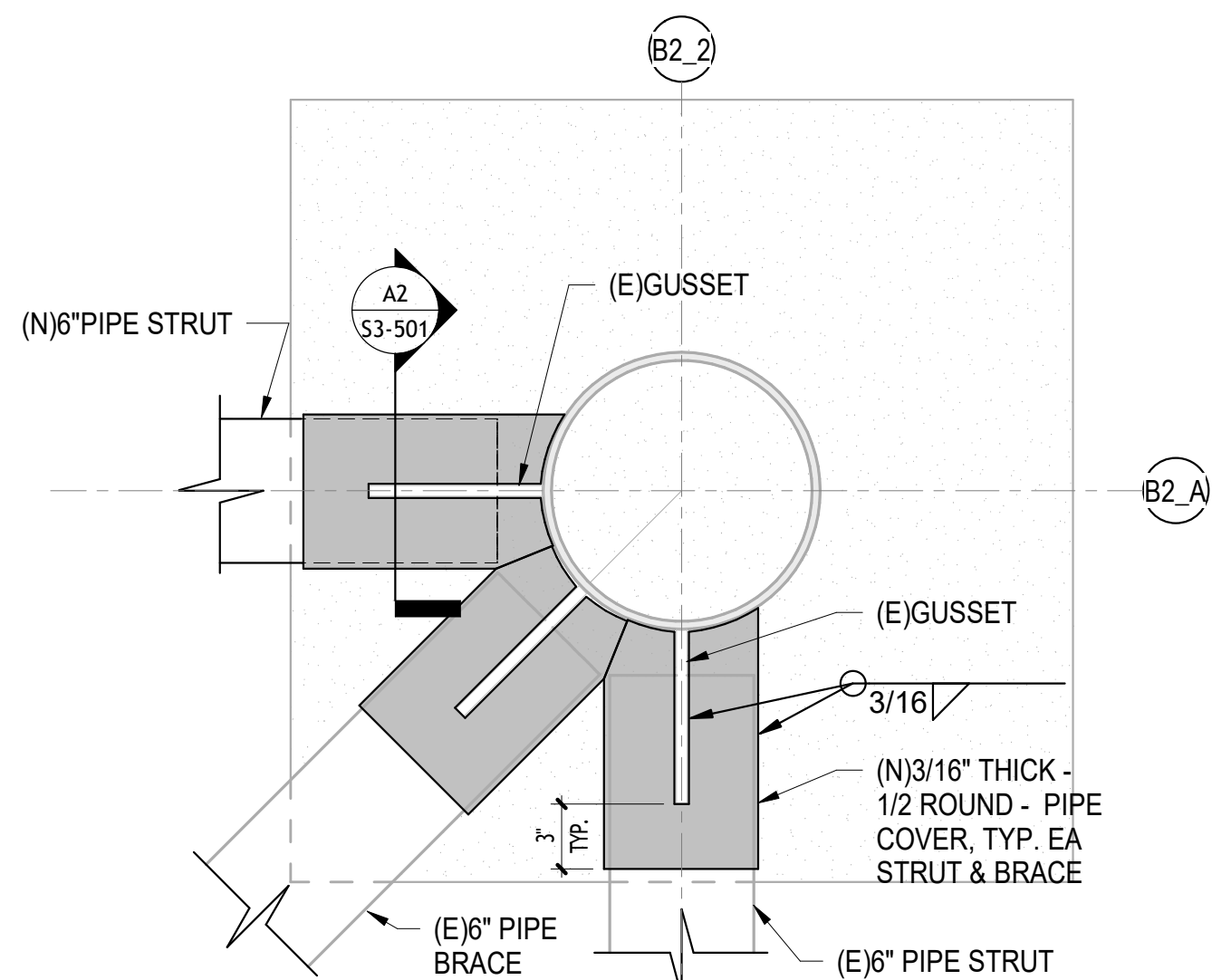
REVISION NO.	SYM.	DESCRIPTION	SH. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION <b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006 <b>HARBOR ENTRANCE CONTROL TOWER FRAMING ELEVATIONS</b>					
DESIGNED: LC					
DRAWN: MCC		SUBMITTED: BID SUBMITTAL <i>GC DL</i>			
CHECKED: LC		DATE: 04/13/2026			
APPROVED: GC		SCALE: 1/4" = 1'-0"			
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION					
CHIEF ENGINEER: <b>Dina Lau</b> E-signed 2026-04-17 08:22AM HST dina.lau@hawaii.gov State of Hawaii Civil Engineer					



NOTE:  
TIGHTEN TIE RODS TO SNUG  
TIGHT CONDITION (AS DEFINED  
IN AISC/ RCSC SPECIFICATION  
FOR STRUCTURAL STEEL  
JOINTS).

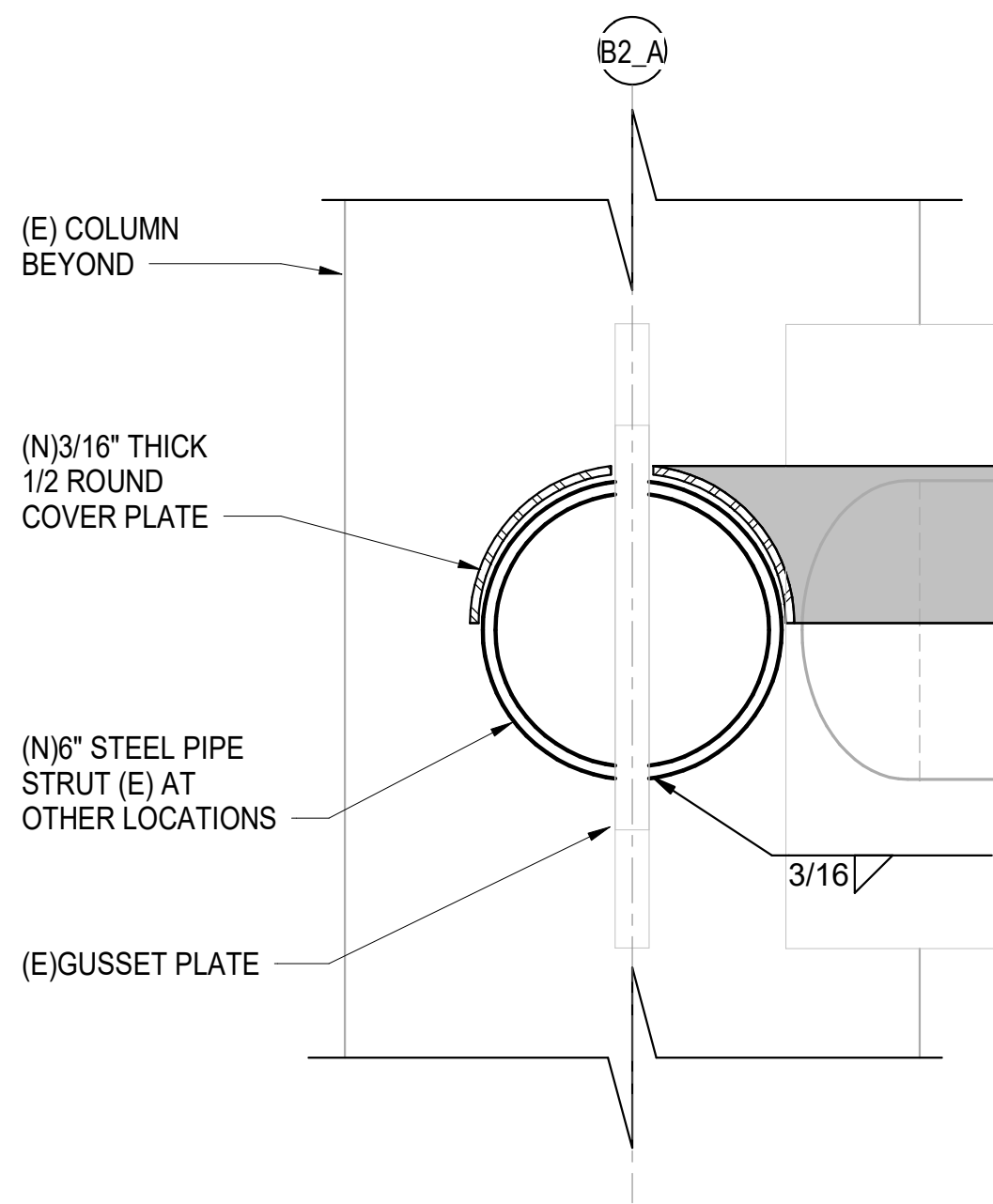
- NOTES:
1. NOTIFY STRUCTURAL ENGINEER IF ANY MEMBERS HAVE LOST MORE THAN 10% CROSS SECTION.
  2. CLEAN AND COAT ALL CONNECTIONS WITH COLD GALV COMPOUND.

**C1** TYP. TIE ROD CONNECTIONS  
SCALE: 1 1/2" = 1'-0"



NOTE:  
WELD PIPE END COVERS ALL ROUND TO PREVENT WATER  
INTRUSION INTO PIPE THROUGH CONNECTION. TYPICAL AT  
ALL PIPE STRUTS AND BRACES

**A1** PARTIAL PLAN - STRUT REPLACEMENT DETAIL AND REPAIRS  
SCALE: 1 1/2" = 1'-0"



**A2** PIPE STRUT & BRACE END COVERS  
SCALE: 3" = 1'-0"

REVISION NO.	SYM.	DESCRIPTION	SHT. OF	DATE	APPROVED
STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES ENGINEERING DIVISION <b>SAND ISLAND SRA PARK IMPROVEMENTS PH. VI</b> TAX MAP KEY: 1-5-041:006 <b>STEEL REPAIR DETAILS</b>					
DESIGNED: Designer					
DRAWN: Author	SUBMITTED: BID SUBMITTAL		DL		
CHECKED: Checker	DATE: 04/13/2026				
APPROVED: Approver	SCALE: As indicated				
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION		Dina Lau E-signed 2026-04-17 08:22AM HST dina.u.lau@hawaii.gov State of Hawaii Civil Engineer			
EXPIRES: 4/30/2026				<b>S3-501</b>	